

*Bring the magic  
of sound to your ears*



*User Guide &  
Reference Manual*

*fmGenie*

*Third Edition*

CONNIE VANS

# fmGenie – Communication for life

## Welcome to your new fmGenie radio aid system

A range of information guides are supplied with your system.

For those new to radio aids, we particularly recommend pages 12-17 of this User Guide and new fmGenie users will find the separate Fast Track Guide is the easiest way to get their new system working.

## User Guide & Reference Manual

This User Guide & Reference Manual contains everything you could possibly need to know about an fmGenie in one book.

In its entirety it is 'intensive reading' – however, keep this booklet safe as most users find it invaluable for future reference, troubleshooting and for expanding their system.



We have carefully divided it into structured sections to help you navigate through the many pages.

We would suggest that you become familiar with using your fmGenie before activating some of the more advanced features.

If you do not have an adviser to turn to for guidance you are welcome to contact the fmGenie support team by fax, phone or email at [fmgenie@connevans.com](mailto:fmgenie@connevans.com)

Many questions can be answered by looking in the Questions & Answers section and the appendices.



## Fast Track Guide

A basic step by step guide to getting started with a new fmGenie system so you can use it straight away.

New fmGenie systems come with a separate Fast Track Guide dedicated to the specific system – such as direct input, neck loop or use with MicroMLxS/MLxS.

*This manual also includes a generic fast track guide to cover the first steps.*



## Encapsulated Tutor Courtesy Card

Ideal for lending to a tutor the first time they use a radio aid so they know how and why they have to wear the transmitter.

Double sided A5 card.



## Encapsulated Morning & Evening Check List Card

To help users or carers keep their equipment up and running.

Single sided A4 card for pinning up on the wall.



## [www.connevans.com/fmgenie](http://www.connevans.com/fmgenie)

This information website contains the entire current Connevans Catalogue plus a wealth of other information, including all the fmGenie sheets featured here.

Check for new information on the fmGenie or print spare copies of information sheets.



## [www.DeafEquipment.co.uk](http://www.DeafEquipment.co.uk)

Online shopping website for all equipment supplied by Connevans

Including spares and additional items to add to your fmGenie system.

**CONNEVANS LIMITED**  
54 Albert Road North, Reigate, Surrey RH2 9YR

Customer Services: 01 737 247571 Text: 01 737 243134 Fax: 01 737 223475  
[www.connevans.com](http://www.connevans.com) [www.DeafEquipment.co.uk](http://www.DeafEquipment.co.uk)

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## Generic Fast Track Guide

This *Generic Fast Track Guide* takes you through the basic steps required to get an fmGenie working – a separate ‘specific use’ fastrack guide is supplied with new systems.

### Part 1 Batteries

The fmGenie uses standard size AA batteries. Rechargeable batteries are the recommended option and, once fitted, are charged ‘in situ’ – just like a mobile phone.

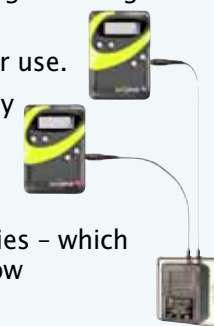
#### Rechargeable batteries – nickel metal hydride (NiMH)

New rechargeable batteries require charging before use.

- 1 To fit the batteries, slide open the battery cover and insert as shown. The technique is a combination of ‘squeeze, thumb and wiggle’ – you won’t break it and the firm fit stops the battery cover accidentally falling off.
- 2 Do NOT turn on the fmGenie.
- 3 Plug the twin tail charger into the socket marked ‘Chg’ and turn on charger – rolling battery bars should be visible on the right of the status display.
- 4 The equipment will be given an initial 4 hour charge – enough for a few days’ use.
- 5 When the display goes blank, fmGenie is ready for use.



After this initial charge, your fmGenie will automatically take either a full or top up charge as required.




#### Non Rechargeable Alkaline batteries

The fmGenie can also be used with alkaline AA batteries – which can be useful in an emergency – you could even borrow some from your TV remote controls!

The performance is the same whatever type of AA battery is used.



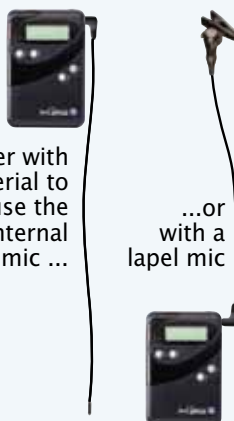
## Part 2a Turning on




- 1 Connect an aerial or lapel microphone into the fmGenie transmitter  external microphone socket (Ext mic).



Either with  
an aerial to  
use the  
internal  
mic ...

...or  
with a  
lapel mic




- 2 Turn on both the transmitter  and receiver  by pressing and holding the ON/OFF button  until the display turns on and the alert indicator flashes once.

*It is time rather  
than pressure  
which turns on an  
fmGenie – to  
prevent accidental  
switching on/off.*



- 3 Check that both units are showing the same channel number.






If they are not, you will need to match the channels.

 PAGES 50 and 84




## Part 2b Using test headphones to check the fmGenie system


Hearing aid users setting up an fmGenie for themselves should skip this section and move on to Part 3.

- 1 Check that 'HI' audio output  is selected on the receiver  by checking the display. If  is not shown, you will need to refer to page 9 and set 'HI'  rather than 'LO' .




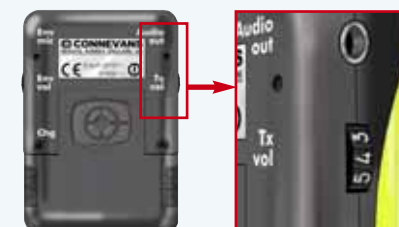
 PAGE 95

- 2 Give the fmGenie transmitter  to a colleague and ask them to walk to the other side of the room while talking normally into the microphone at 150mm (the length of a biro) from the mouth.

- 3 Plug the test headphones into the fmGenie receiver  audio output socket (Audio out).





- 4 Using the test headphones, listen to the fmGenie receiver  and adjust the Tx volume to a comfortable level.






Assuming you are able to hear your colleague talking, well done – you are halfway to a fully working system. The next step is to get the hearing aid(s) working with the fmGenie receiver.


## Part 3a – Using an fmGenie receiver with an inductive neckloop and hearing aid on ‘T’






- 1 Ensure that the ‘Tx vol’ volume is at minimum.
- 2 Check that ‘HI’ audio output  is selected on the receiver  by checking the display.

If  is not shown, you will need to refer to page 9 and set ‘HI’  rather than ‘LO’ .



 PAGE 95

- 3 The hearing aid user should listen at arm’s length to somebody talking to establish the level of sound from the hearing aid alone – page 11 explains why we do this.
- 4 Plug in a neck loop.
- 5 Make sure that both fmGenie units are turned on.
- 6 The hearing aid wearer should take the receiver  and place the neck loop around their neck. They should then turn their hearing aid(s) to the ‘T’ position.
- 7 The helper should take the fmGenie transmitter  and walk to the other side of the room while talking normally into the microphone at 150mm (the length of a biro) from the mouth.
- 8 The hearing aid user should be able to hear the helper through the fmGenie receiver  by adjusting the Tx volume up to a comfortable level.



Congratulations, it’s as simple as that!

If nothing is heard with the hearing aid, a hearing helper could listen using a pair of test headphones. If the helper can hear with the headphones then any problem must lie with either the hearing aid or the neck loop.


The hearing aid ‘T’ position can be roughly checked by moving the hearing aid near to a mains transformer (e.g. any plug-in power supply) when you should hear a buzz or hum. The neck loop can be checked by exchanging it for a spare one.


## Part 3b – Using an fmGenie receiver with a direct input hearing aid

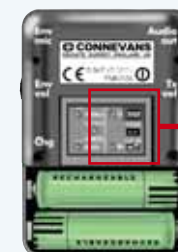


Each type of direct input hearing aid requires a specific connection shoe. Your hearing aid instruction guide should tell you the hearing aid switch settings to use.

For programmable hearing aids it is necessary for the direct input option to have been activated when it was programmed – please refer any hearing aid questions to your audiological advisor.

- 1 Ensure that the ‘Tx vol’ volume is at minimum.
- 2 Select ‘LO’ audio output in the battery compartment by sliding the switch to the left – this is important in order not to overload the input on the hearing aid. The  symbol will then show on the status display.

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
- 3 The hearing aid user should listen at arms length to somebody talking, to establish the level of sound from the hearing aid alone. Page 11 explains further as to why we do this.



- 4 Plug the direct input lead into the 'Audio out' socket and connect to the direct input shoes and hearing aids. It may be necessary to temporarily remove the hearing aids to do this.



- 5 Make sure that both units are turned on.
- 6 The hearing aid wearer should take the receiver  and can now put their hearing aids back on.
- 7 The helper should take the fmGenie transmitter  and walk to the other side of the room while talking into the microphone at 150mm (the length of a biro) from the mouth.

- 8 The hearing aid user should be able to hear the helper through the fmGenie, adjusting the receiver  Tx volume control to a suitable level as required.



It may be necessary to repeat steps 3 – 8.

### fmGenie user features

This generic fast track guide is designed to get you started with your new fmGenie quickly and easily. To help achieve this, your fmGenie has been factory set for single channel operation with some user features disabled.

The available features are all explained in section 4 and, when you have chosen the features you wish to use, appendices 1-3 will explain how to access them.

### Part 4 - Setting the volume

In an ideal world, setting the volume controls (and the treble and bass tone) would be done with the help of an audiologist, however it is also possible for a good listener to set their own listening preference.

*Very simply, the sound heard at a distance through the fmGenie should be similar to, or slightly louder than, the sound heard from the hearing aid on its own at close range in a quiet room.*



### Volume controls

The fmGenie volume can be set by a comparison method.

- 1 Initially establish a satisfactory listening level with the hearing aid(s) alone, at arm's length from somebody talking to you.
- 2 Turn on the fmGenie system, give the transmitter to your helper and ask them to walk away whilst talking.
- 3 You should now listen to the hearing aids but this time through the fmGenie receiver without changing the hearing aid volume controls. Adjust the transmitter volume control (Tx vol) to match, or be slightly louder than, the original listening level through the hearing aid alone.



### Tone controls

Setting the tone controls is straightforward but most users do not need to adjust them at this stage.



## The problem with hearing aids



A hearing aid user in a room will often find that the level of background noise – general shuffling and coughing – can be as loud as the speaker's voice, and amplified sound, such as television, can sound distant and unclear. This problem is usually accentuated by poor room acoustics. It is difficult for hearing people to appreciate the problem.

The human ear seems to be capable of filtering out many unwanted sounds, but a hearing aid is unable

to do this. Whereas a pair of spectacles can correct sight, hearing aids do not fully correct hearing loss.

In a basic one-to-one situation a hearing impaired person with a correctly fitted hearing aid should be able to make maximum use of their residual hearing using a hearing aid – providing there is not too much background noise and that the speaker stays close by – say within one metre or at arm's length. Unfortunately, this type of ideal situation is rare.

When someone moves away, the sound pressure level at the hearing aid microphone falls. It is certainly possible to turn up the amplification of the aid and although this will maintain the sound output level from the aid, it will also mean that the level of background and surrounding noise is increased.

Most people have used a cassette recorder or dictating machine to record their voices. A comparison would be to put the microphone



on the other side of the room. If you did, your voice would sound distant with a lot of background noise. (Why not try it!) Both a hearing aid and a cassette recorder have a microphone to 'feed in' sound – hence, the comparison between the cassette recorder and the hearing aid.

The day that you stop seeing people on TV wearing microphones is the day that you can start looking for a hearing aid which will not benefit from a radio aid system.

There are many types of hearing aids currently available with each one having different characteristics and response. Hearing aids which suit one person may well be totally unsuitable for another. It is most important that a user feels happy with an aid and that the hearing aid has been correctly set by the dispenser.

A hearing aid has both gain (amplification) and frequency compensation. The gain counters the level of hearing loss, and the frequency compensation helps to compensate for the type of hearing loss. The word 'help' is used intentionally as help is all the aid can do; it cannot restore hearing.



A hearing aid will perform to the best of its ability when the person talking is within a distance of approximately one metre from the person wearing the hearing aid. In practice, it is realistic to say that the effectiveness of the hearing aid decreases when the distance between the person speaking and the hearing aid user is greater than an arm's length. A radio aid system will help to solve this problem.



## THE fmGenie RADIO AID SYSTEM

### BACKGROUND

#### Principle of operation

The fmGenie is a wireless communication system designed specifically for use by people with a hearing loss. The system consists of two main elements: a transmitter  and a receiver . The transmitter unit collects the sound and transmits it without loss of quality to the receiving unit. Both 'ends' of the system are portable and the receiving unit presents this relayed sound in some way to the user.



#### Design objectives

Radio systems for deaf and hard of hearing people have been available for many years. The concept for the fmGenie was to design a product with high visual appeal and acceptance combined with functionality and features second to none.

The fmGenie has been designed to work with personal hearing aids. It is the user's hearing aids that provide the hearing loss correction and the power or gain for a user. However it would be acceptable to say that a radio aid adds "effective" gain because as the speaker moves away from arm's length distance there is no reduction in the volume (or power!) presented to the hearing aid user.

The fmGenie provides a high quality sound feed to allow the hearing aids to work to the best of their ability in a wide range of situations. Your fmGenie has also been designed to allow you to gain maximum benefit from future improvements in hearing aids.



#### What is special about the fmGenie?

The Connevans fmGenie has unrivalled sound quality, advanced user features and a superb range of accessories to support & extend system use.

The fmGenie is a multichannel system with team teaching, long battery life, LCD status display and many innovative features including Wirefree Direct Input - WDI. In this reference guide we will help you determine the features that are of benefit to you and the options to select - we will also help you decide which features to lock, disable or simply ignore.

#### What will a radio aid NOT do?

Well, a radio aid normally adds no gain (or power or volume) to a hearing aid - so a user will not be given increased amplification. It is the power output of the hearing aid, NOT the radio aid, that the hearing aid user listens to.

#### What does it do then?

The fmGenie will provide a consistent sound feed over varying distances just as if the person speaking was always at arm's length.



The system can be used in conjunction with hearing aids, cochlear implant processors or headphones.

#### Who wears what?

The fmGenie transmitter  unit is worn by the person speaking. The fmGenie receiver  is worn by the user who carries it around with them wherever they go.

When using the fmGenie system, cochlear implant and hearing aid users still listen through their own aids but now the speaker's voice is fed 'directly to the ear of the user'. Headphone users simply listen to a receiver.



#### How does the hearing aid 'hear' the radio aid?

The input to the user's aid, or implant processor, from the radio microphone receiver can be via a direct input connection (if available) or an inductive loop pick-up 'T' coil.

The fmGenie will provide a consistent level of sound wherever the hearing aid user or person talking may be in the room. There is a great improvement in the 'signal to noise ratio' heard by the user with much less background 'mush'.

#### What happens if the person speaking talks loudly?

The Connevans fmGenie system has an automatic gain control (AGC) to prevent loud sounds from causing discomfort or distortion.



### How well does it work?

The fmGenie has a very good frequency response with low levels of distortion. For hearing aid users the overall performance of the system will probably be limited by the user's own hearing aids. If the hearing aids are correctly fitted then the overall system will perform well, but if the hearing aids are badly chosen or fitted it will not. The system will give a range of at least a room inside or coverage outside of over a football pitch, thus meeting most requirements.

### Who will the fmGenie help?

Your audiologist is the best person to consult with regards to suitability of equipment. However, as a rough guide an fmGenie radio aid will be of benefit to anyone who is a good hearing aid user. If you are able to sit beside a hearing aid user in a quiet room and communicate via their hearing aids rather than by lip reading (i.e. if the person is able to make good use of their hearing aids) then a radio aid will be helpful, allowing the hearing aid user to 'listen at a distance'. The fmGenie will help to counteract the problems of distracting sounds outside that quiet room situation. The fmGenie will also help those with a mild or no hearing loss, who will benefit from help with concentration in lectures, by using a pair of headphones.

### How does it sound?

Using a pair of test headphones it is possible for a hearing person to 'get a feel' for the improvement that an fmGenie can give in noisy situations. When demonstrating an fmGenie to a user sitting nearby, an initial response from the hearing aid user of "sounds the same", is not unusual. It is difficult to improve on the hearing aids themselves and because a consultation room is usually quiet it is not until we move outside into a more usual level of ambient noise with a greater distance from the person talking that the user realises the potential benefit of a radio aid.

Bear in mind however, that a hearing aid user is not used to interpreting sounds from afar. "Over here" means nothing, people often don't



understand at first where the sound comes from if they cannot see the speaker talking. A radio aid increases the emphasis on sound, but visual clues are still important. Experience and practice are necessary to make full use of this available 'sound'.

### Is the fmGenie a true wireless radio system?

Yes. The Connevens fmGenie is an FM radio system working on a similar basis to the domestic BBC VHF radio network, although the fmGenie operates at a higher frequency and cannot be picked up on a conventional domestic radio. BBC Radio 2 transmits between 88-90.2 MHz in the VHF FM band and narrow band radio microphone systems for the hearing impaired operate around 173-175 MHz. In order that a number of radio aid systems may operate on the same site, a number of channels have been allocated, each with specific frequencies. Manufacturers use varying channel coding systems; the fmGenie uses a channel number code system (see appendix 8 for a comparison chart).



### Who manufactures the fmGenie?


The fmGenie system has been designed by Connevens and is manufactured, sold and serviced in our works in Reigate - Made in Britain.


### Where can I find further information?

[www.connevens.com](http://www.connevens.com)

## System elements

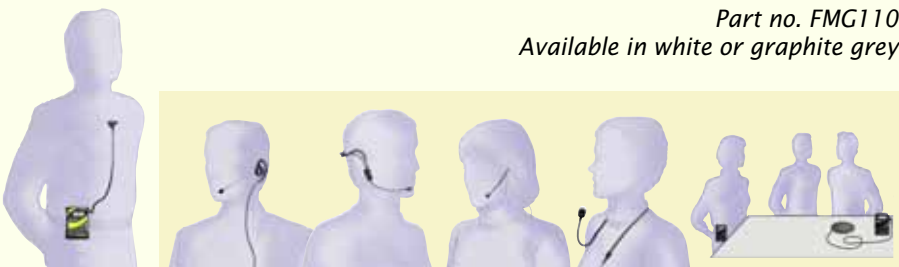
### fmGENIE TRANSMITTER

The fmGenie transmitter  'sends' or 'transmits' the sound that will be heard by the listener and is worn by the lecturer or person talking.

The transmitter  can be used in a neck harness with its internal microphone or in a belt pouch with any of the range of external microphones.




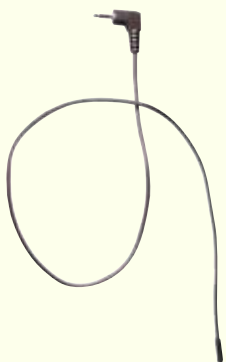
Part no. FMG110  
Available in white or graphite grey



External microphones for use with transmitter – see pages 20-22.  
See also Connevans Catalogue or website for current range of microphones

### fmGENIE TRANSMITTER AERIAL


An aerial is supplied with each new transmitter. When an fmGenie transmitter  is used with a lapel microphone the lead acts as the aerial so a separate hanging aerial is only required when the internal microphone is being used.





Part no. FMG25M



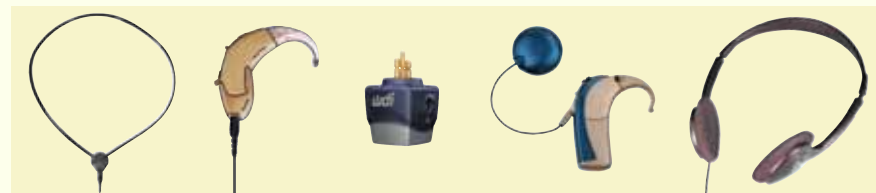
### fmGENIE RECEIVER

The fmGenie receiver  'receives' the signal from the transmitter and is worn by the hearing aid user. It may be carried in a pocket or in a pouch with belt clip with or without a harness. It can be concealed under clothing if wished.

The fmGenie receiver  can be used in variety of ways. A pair of personal stereo style headphones or earphones can be used by people with minimal hearing loss. Hearing aids can be used on their 'T' setting or with direct input connection if available. The fmGenie receiver  can also be connected to cochlear implant processors.



Part no. FMG121  
Available in white or graphite grey



For use with hearing aid 'T' input, direct audio input, wire free direct input, cochlear implant processor or headphones

When used with an inductive neck loop, usually worn under a sweater or jacket, it will probably also be necessary to use an environmental lapel microphone (Part no. FMG213M6) so that the hearing aid user can hear their own voice and the sound immediately adjacent to them.

### fmGENIE DESIGNER FLASH

The fmGenie designer flash allows you to customise the look of your fmGenie.

Part no. FMG13



See page 37 for more information and the Connevans Catalogue for range of colours available.

### fmGENIE MICROPHONE PACK

Part no. FMG213M6

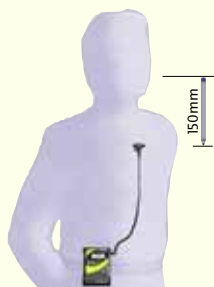


Contains a microphone head, lapel clip and a 600mm lead

#### Microphone head Part no. FMG211

This is the actual device which picks up the sound. Ideally the microphone should be situated 150mm (6 inches or the length of a biro!) from the mouth.

The mic head fits to the lead with a firm push on/pull off action.



#### Microphone lapel clip Part no. FMG212

Use the clip to position the microphone head the right distance from the mouth.

#### Microphone connecting lead Part no. FMG21M600

The lead has a 2.5mm right angle plug which goes into the 'Ext mic' ( ) or 'Env mic' ( ) of the fmGenie.

The lead needs to be long enough to reach the fmGenie without straining which could damage the lead.

Lengths available:

600mm	FMG21M600
800mm	FMG21M800

### fmGENIE EARWORN MICROPHONE

An earworn microphone for use with fmGenie transmitters in noisy rooms and with soundfield systems. It is particularly light and comfortable to wear.

Part no. FMG23- Short boom 90mm  
 Part no. FMG23S Standard boom 105mm  
 Part no. FMG23+ Long boom 120mm



### fmGENIE FEATHERWEIGHT HEADWORN MICROPHONE

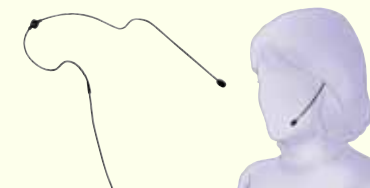
Exceptionally light and comfortable to wear but only suitable for use by one individual.

A featherweight microphone only has limited adjustability so this model is suitable when it is possible to have one's own to keep – which is good for hygiene too. It is possible to make minor adjustments to the frame shape yourself.

Diam. of frame: 2.5mm Weight: 15g.

Featherweight microphones:

FMG2450S Small frame size,  
 FMG2450M Medium frame size  
 FMG2450L Large frame size



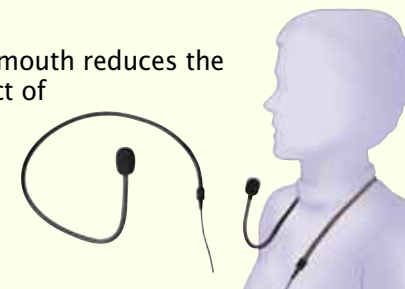
### fmGENIE FLEXIBLE COLLARWORN MICROPHONE

An easily shaped flexible gooseneck form collar worn microphone most suitable for soundfield use.

There can be hygiene concerns when a headworn microphone for a soundfield system is shared so this microphone is a good compromise.

Moving the microphone closer to the mouth reduces the chance of feedback although the effect of head movement is increased. For this reason we do not normally advise using this type of microphone for conventional radio aid use.

Overall length: 600mm,  
 Diam. of frame: 6mm, Weight: 84g.  
 Part no. FMG260



For up-to-date information on products available from Connevens, visit the Connevens websites.

[www.connevens.com](http://www.connevens.com)  
 – the information website for Connevens



[www.DeafEquipment.co.uk](http://www.DeafEquipment.co.uk)  
 – the e-commerce website for Connevens





### fmGENIE CONFERENCE MICROPHONE

Designed for use on a table, the fmGenie conference microphone is an invaluable accessory for use in group discussions.



Can be used with either a transmitter  or receiver .



Please see page 69 for further information.

Part no. FMG220

### fmGENIE POUCH

For use with either transmitter  or receiver , the pouch has a belt clip and may be worn directly on a belt or clipped onto waistband or pocket.

The pouch can also be used with any of the wide range of Modular Harness System products.

Part no. FMG630



### HANGING BELT POUCH


An fmGenie belt pouch which hangs securely from the belt and is particularly suitable for 'more active children' and those who wear their belts loose.


Part no. FMG650 Suitable for belts up to 30mm (1 1/8").



All spares and accessories are available online at our shopping website, visit [www.DeafEquipment.co.uk](http://www.DeafEquipment.co.uk) and click on the fmGenie section.

### HIP POUCH & SHOULDER STRAP

Particularly good for use with the transmitter  as it is very easy to transfer from person to person.

Can also be used with a receiver .

Requires an fmGenie microphone pack (not included) for use with a transmitter.

Part no. FMG640



### TRANSMITTER NECK HARNESS & POUCH

The pouch on the neck harness has a hole for the transmitter internal microphone.

Use the popper fastening to put the strap around the back of the head rather than trying to pull the strap over the head.

If using the internal microphone, the transmitter aerial will need be used.

Part no. FMG621



### MODULAR SYSTEM BELT STAR ADAPTOR



The belt star adaptors are special clips designed to hold pouches securely to the wearer's own belt.

There are two versions of the modular system star adaptor available; one for fitting up to 20mm belts or harness webbing used in the modular system body harness and the other up to 30mm belts.

Part nos. 35STAR20 & 35STAR30



## MODULAR SYSTEM WAIST HARNESS

For use with the fmGenie pouch with either transmitter  or receiver . It is adjustable in size with a two fingered grip release clip. The belt is fitted with a moulded carrier onto which the pouch belt clip fits in such a way that the unit cannot accidentally be pushed off it.

Small Part no. 35WAISTS  
Standard Part no. 35WAIST  
Extra Large Part no. 35WAISTXL



## MODULAR SYSTEM CHILD'S BODY HARNESS

Has a moulded carrier which holds the fmGenie pouch securely. The style is similar to a child's reins harness with the child putting both arms through it.

The radio microphone would normally be worn at the front with the release clip at the back – but in fact the harness can be worn reversed so that the child is less likely to paint it! An optional elasticated strap section is included for added comfort.

Part no. 35BODY



## UNIVERSAL SMALL WAIST POUCH

Particularly suited to children who don't need to carry any extra items. The single pocket waist pouch is much smaller than our 'bum' bag.

Pouch size: approx. 165mm wide x 95mm high.

Belt size: up to 810mm (32") max.

Part no. 35UP



## RECEIVER 'BUM' BAG

The design of the Connevens range of 'bum' bags includes a special separate rear zip section to safely carry a transmitter or receiver – other items can be carried in the front section.

The zip of the rear section closes slightly short to allow the safe exit of a direct input lead or neck loop lead. The Connevens bum bags are available in a range of colours to suit your mood!



Pouch size: Approx. 230mm wide x 130mm high

Belt size 32" max. Part no. 2247

Belt size 31-49" Part no. 2248



## CARRY POUCH

A woven black polyester pouch, with a canvas feel, will hold a receiver , transmitter  and associated leads.



A nice item for daily use which fits easily into school bags and encourages users to keep their equipment tidy.

Pouch size: Approx. 175mm x 180mm x 45mm

Part no. FMG615



## FMGENIE SMALL SYSTEM CARRYING CASE

A small rigid case with a foam lining which has cut outs to suit the fmGenie. It will hold a transmitter , receiver , 4 batteries and a few accessories. Unlike the full system carrying case, no charger or harnesses are carried with the result that it is much smaller and much more suited to daily use.

Case size: Approx. 230mm x 190mm x 45mm

Part no. FMG610GY Grey case

FMG610BK Black case



## UNIVERSAL CARRY CASE

A medium size 'lunchbox style' case with plain 15mm foam inserts to hold an fmGenie or CRM-220 system with leads still connected and the units still in their pouches.

Case size: Approx. 275mm x 223mm x 79mm

Part no. FMG612

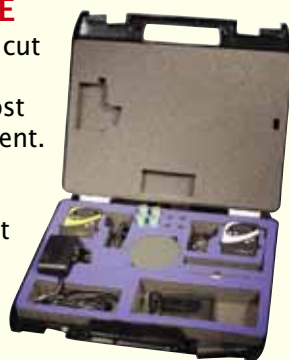


## fmGENIE FULL SYSTEM CARRYING CASE

This is a rigid case which has a foam lining with cut outs to suit the fmGenie. All the elements of a working system can be carried in it. This is a most useful item when storing or distributing equipment. The case will hold a transmitter, receiver, spare flashes, harness, 8 batteries, twin tail charger, conference microphone and direct input or neck loop accessories.

Case size: Approx. 385mm x 330mm x 85mm

Part no. FMG611

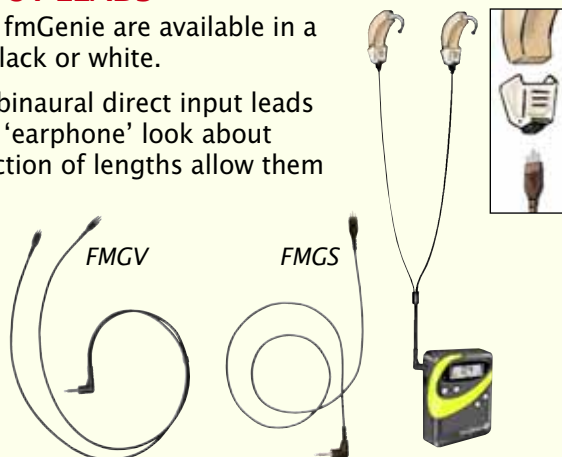


## fmGENIE DIRECT INPUT LEADS

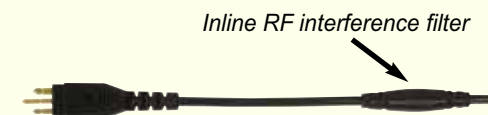
Direct input leads for the fmGenie are available in a range of lengths and in black or white.

The Connevens fmGenie binaural direct input leads have a 'V' format with an 'earphone' look about them. The extended selection of lengths allow them to be worn up the back if desired. The 'V' lead has a small slider midway along the lead which can be moved by slightly wetting it.

Single leads are available for users with one hearing aid.



There is also a range of direct input leads with inline filters designed to reduce possible interference from digital aids.



Please refer to the Connevens catalogue or websites for specific lengths and part numbers – direct input shoes are also listed there.

**IMPORTANT NOTE:** The fmGenie direct input leads are unattenuated and must only be used with fmGenie receivers.



A range of attenuated direct input leads for use with personal stereos is available from Connevens – these leads are clearly identifiable as they have a blue 3.5mm jack plug. Please see 'Listening for Pleasure' in the Connevens Catalogue.

## MULTITURN PLASTIC NECK LOOP

A thin loop which has a soft flexible feel, lies comfortably around the neck and offers excellent performance.

This neck loop has a 2 pin N.P. socket and requires the use of the patch cord shown below.

Plastic neck loops are approx. 225mm diameter.

Thickness of loop: 5.5mm. Weight: 35g.

Part no. FMG441



## Patch cords for multiturn plastic neck loop



Black with a straight 2 pin N.P. plug for plugging into the neck loop and a right angled 3.5mm plug to connect to the receiver. The neck loop patch cords are available in a range of lengths and can also be used with bone conductors.

Part no. FMG42... available in 200, 400, 600 and 800mm lengths.





### fmGENIE WDI & WDI NECK LOOP

The fmGenie Wirefree Direct Input (WDI) unit plugs into an ear level receiver fm shoe. It is powered from the hearing aid and is driven from a lightweight WDI neckloop attached to an fmGenie receiver.



The fmGenie Wirefree Direct Input unit combines the advantages of wirefree direct input with fmGenie features, such as team teaching, long range, multiple channels, tone control adjustment and status display.

The WDI neck loop may be worn under clothing without affecting the sound quality.

*Please note that an ear level receiver fm compatible direct input hearing aid is required to use the fmGenie WDi unit.*



fmGenie WDI unit

Part no. FMGWDI

WDI neck loops:

100mm lead, diam. approx 225mm

Part no. FMG474S

250mm lead, diam. approx 225mm

Part no. FMG474J

500mm lead, diam. approx 225mm

Part no. FMG474M

900mm lead, diam. approx 225mm

Part no. FMG474L

### fmGENIE EARPHONES

Personal stereo style earphones for users requiring help with concentration in lectures or for those with a mild hearing loss.

Part no. FMG7431



### fmGENIE HEADPHONES

Personal stereo style headphones for users requiring help with concentration in lectures or for those with a mild hearing loss.

Part no. FMG7420



### fmGENIE TEST HEADPHONES

A lightweight pair of headphones for routine listening tests, not particularly robust but comfortable to wear with a pleasant sound and very good value for money!

Part no. FMG7410



### BONE CONDUCTOR

A bone conductor can be used with an fmGenie receiver. There are three parts in a complete unit; the bone conductor itself, the metal headband and the connecting lead. More than one user has commented that a bone conductor on an fmGenie has a much stronger vibration than a modified post-aural bone conduction hearing aid.

FMG42600

600 mm patch lead

FMG42800

800 mm patch lead

FMG48V600

600mm 'V' patch lead for 2 bone conductors

MBONECONB2

Bone conductor (beige)

MBONEHEAD

Headband for single bone conductor

Double sided headbands are also available to special order.



### fmGENIE PERSONAL SOUNDFIELD CASE AND AMPLIFIED SPEAKERS

A personal soundfield option for use with an fmGenie receiver which can be a useful solution in some situations, such as for cochlear implantees who have not been reviewed or fitted with a personal radio aid system.

The fmGenie volume control adjusts the speaker volume and can be easily set by the user. We advise the use of an ear or headworn microphone with the transmitter to reduce the chance of feedback.

Size: 200 x 125 x 80mm inc. fmGenie & pouch.

Weight incl. speakers, fmGenie & pouch: 468g.

Part no. FMG681



## SYSTEM ADD-ON ACCESSORY PACKS

These packs contain connecting leads and instructions for connecting to external equipment.

### FMG PACK 1: TV SCART

Allows you to plug an fmGenie transmitter directly into the TV.

Includes a SCART to phono socket, the lead to fit the transmitter and an instruction sheet.

Part no. FMG9PK01B



### FMG PACK 2: MULTIMEDIA/AUDIO

This pack will allow you to connect your fmGenie to a wide range of multimedia/audio equipment.

Includes an fmGenie transmitter input adaptor plus a pack of assorted leads to fit most requirements and instruction sheet.

Part no. FMG9PK02



### FMG PACK 3: DIGITAL VOICE RECORDER

Excellent quality recording from an fmGenie receiver and able to record continuously for many hours. Ideal for lectures and meetings.

The unit records exactly what is heard by the radio aid by recording directly from an fmGenie receiver being used with direct input. Replay is via a 'blue plugged' direct input binaural lead using your existing direct input shoes.

Includes a Digital Voice Recorder, leads and instructions.

Part no. FMG9PK03B



### FMG PACK 4B: TELEPHONE USE - WITH A HANDSET AT HOME OR WORK

With this pack, the phone conversation from your corded phone can be fed directly into your hearing aid via the fmGenie system.

Includes a telephone curly cord listening adaptor with volume control, connection to fmGenie and instruction sheet.

Part no. FMG9PK04B



### FMG PACK 5: TELEPHONE USE - WITH HEADSET AT WORK

Connecting an fmGenie radio system into a telephone offers the best possible quality of telephone sound for hearing aid users.

Provides a high quality hands-free telephone/telesales facility which may literally make the difference between being able to work or not.

Suitable for use with virtually all telephone systems, both analogue and digital. The use of a headset microphone leaves the hands free for keyboard entry.

Includes a transmitter input adaptor, a T-Call base adaptor, SupraPlus monaural headset and instruction sheet.

Part no. FMG9PK05



### fmGENIE ACCESSORIES TESTER

Allows you to functionally test:

- a direct input lead when connected to a radio aid
- a WDI, MLxS or other ear level receiver
- an fmGenie aerial
- fmGenie & CRM-220 microphones.

The fmGenie accessories & MLxS etc tester is an indispensable product for both Teachers of the Deaf and carers. See page 71 for full details.

Includes headphones to allow normally hearing person to test the system, pack of AA batteries, a carry pouch and instruction sheet.

Part no. FMG750



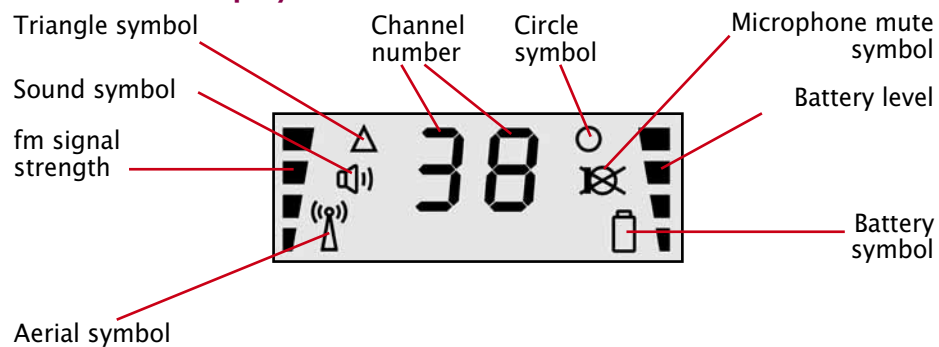
## USER OPERATING GUIDE

### fmGenie Transmitter

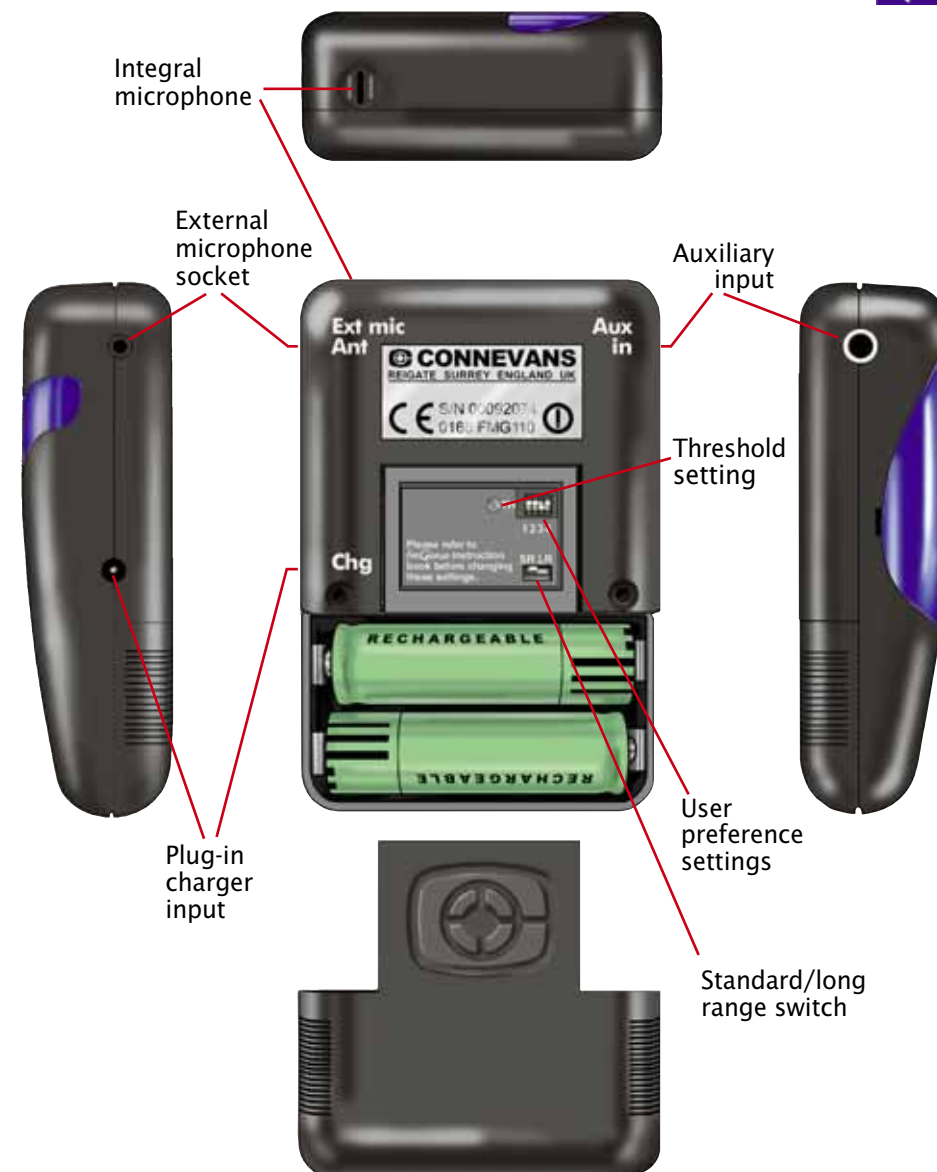
#### Transmitter front



#### Transmitter Display




#### Transmitter top, back and sides






## fmGenie Transmitter

Transmitters are easily identified by the Tx in a blue square  on the front. Another obvious feature is that the transmitter has no volume controls while the receiver has one on each side.


### MICROPHONE

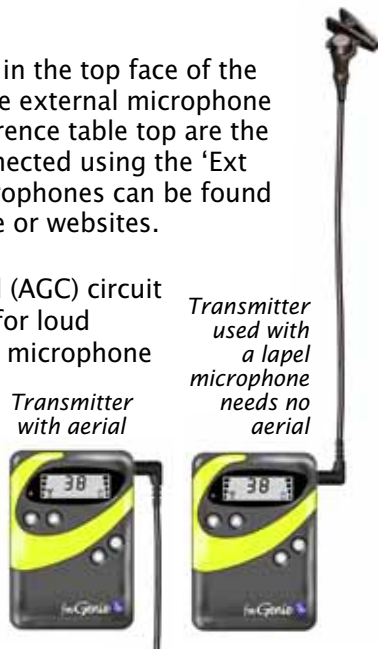
The transmitter  has an integral microphone in the top face of the unit although most users will choose one of the external microphone options – lapel, earworn, collarworn and conference table top are the common ones. These microphones are all connected using the ‘Ext mic’ socket and the full range of available microphones can be found on page 20-21 and in the Connevans catalogue or websites.

There is a sophisticated automatic gain control (AGC) circuit in the transmitter which will help compensate for loud speech levels. In use, both the internal or lapel microphone should be near to the mouth to reduce the effects of background noise; ideally 150mm (6" or the length of a biro) from the mouth.



### AERIAL

A separate hanging aerial is not required with external microphones as the microphone lead itself acts as the aerial.




When using the internal microphone, a hanging aerial will need to be used. Please note that a hanging aerial is not the same as a microphone extension lead without its microphone head plugged in as the fmGenie  will identify this as a faulty microphone.




### WEARING AN fmGENIE

The  can be worn in a variety of ways. The most usual is to use a belt pouch and a lapel microphone. A hip pouch alternative is also available (see page 23) as is a neck harness for those simply wishing to wear it around the neck. Unlike a belt pouch, the neck harness has a hole for the internal microphone in a .



### ON/OFF

To turn on an fmGenie , hold down the on/off button  until the alert indicator flashes and you see the status display. To turn off, hold down the  button until the display disappears. It is time rather than pressure that is required to turn an fmGenie on or off.

The facilities available in your fmGenie  depend upon how it has been set up. The majority of users will simply turn it on and use it.

Our advice is to leave the transmitter on for the duration of the lesson and use the microphone mute facility when sound from the transmitter is not required, see below. This is especially important with digital hearing aids which can sometimes cause interference (noise) from the receiver when the transmitter is turned off.


### STATUS DISPLAY

A typical  status display is shown here. We would expect to see a 3 bar aerial, a channel number, the level of battery charge and the sound symbol  when someone talks.



### Other common status display information

A 4 bar aerial shows that long range has been selected.

A flashing  after turning on indicates that some form of channel change facility is enabled.



Appendix 4 explains other display information and error messages.

*An explanation of the battery charge levels is shown on page 56.*





### STAR FUNCTION CONTROL



#### Transmitter microphone muting

(Default setting: enabled)

The microphone mute is a useful facility for making discreet aside comments without being overheard or for use when the tutor is talking to people other than the fmGenie user.



If there is no flashing , a short press of the  star function  button will mute the  microphone – as long as the facility has not been disabled.

If the feature is active the alert indicator and microphone mute  symbol will flash (as a reminder that users cannot hear you). Another press of the  button returns to normal.

## CHANNEL CHANGE

When first turned on a flashing  $\Delta$  indicates that one or more of the channel change features is available.



### Manual channel change

(Default setting: off)

Note: to avoid the possibility of two transmitters being on the same channel, we would not advise that this feature normally be enabled.

When the manual channel change facility has been enabled, for 2 minutes after turning on (while the  $\Delta$  is still flashing) you can use the UP / DOWN  $\nabla$   $\Delta$  buttons to change channel. Alternatively, during the same time period, pressing both the  $\nabla$   $\Delta$  together will select the default channel. A short press of the  $\textcircled{1}$  button will truncate the tuning (channel select) period and stop the flashing  $\Delta$ . See appendices 2 & 3.

### Autotune

(Default setting: off, see appendix 2)

Another  $\text{Tx}$  channel change feature that can be enabled is the autotune option. When autotune is enabled, if the  $\text{Tx}$  buttons on both transmitter  $\text{Tx}$  and receiver(s)  $\text{Rx}$  are pressed during the channel select period (while the  $\Delta$  is flashing) then receiver(s)  $\text{Rx}$  within approximately 2 metres will automatically tune to the  $\text{Tx}$  channel.

The  $\text{Tx}$  channel number flashes when autotuning is active and the  $\text{Rx}$  scrolls through the channels to find the  $\text{Tx}$  channel. Pressing the  $\text{Tx}$  button again on the  $\text{Tx}$  stops the autotune permission signal. To prevent problems from 'unintentional' button pressing the fmGenie transmitter  $\text{Tx}$  has a 2 minute and the fmGenie receiver  $\text{Rx}$  a 1 minute 'window' for channel changing after turn on. The channel select period may be cancelled by a short press of the  $\textcircled{1}$  button. Please note that an aerial or microphone is required in the  $\text{Tx}$  and an output lead in the  $\text{Rx}$  for autotune to work.

During autotune, a high frequency tone can be heard when using a pair of headphones with the  $\text{Rx}$ . This tone is, however, beyond the frequency response of most hearing aids. If a function has been disabled the display will show "--" when the relevant button is pressed.

## CONNECTING AN fmGENIE TRANSMITTER TO EXTERNAL EQUIPMENT

An fmGenie transmitter  $\text{Tx}$  can be directly connected to external equipment such as TV or video, please see page 66 for details.



## AUTO POWER OFF - BATTERY SAVING

In order to conserve battery life, your fmGenie  $\text{Tx}$  and  $\text{Rx}$  will automatically turn themselves off if no sound has passed through the system for 1 hour.

Receivers using an environmental microphone will automatically turn off if no sound is received from the transmitter for 2 hours.

## THE DESIGNER FLASH

The designer flash is available in a wide range of colours, see the *Connevens catalogue for the current range*. Users can use enamel paints to individualise flashes (under supervision) if they wish!



The flash is not intended for frequent changing and double sided sticky tape may be fitted on the underside to allow them to be stuck down if required.

### To remove the designer flash

Use the black end of the twiddling stick (or your fingernail!) and insert into the small slot at the side of the flash on the left of the fmGenie. Lever the flash off carefully by lifting and sliding the tool around the edge of the flash rather than twisting it.



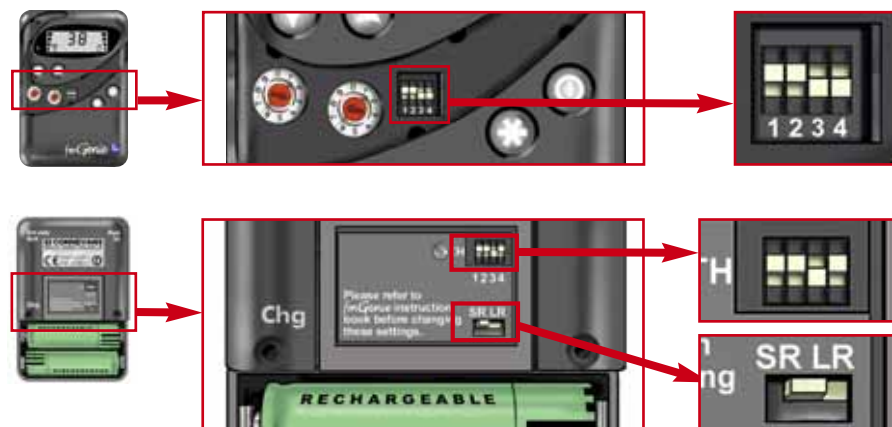
### Fitting the designer flash

Locate the lower left corner and then the bottom edge. Press the first peg into place. Check that the top pip is under the lip and press the second peg into position. Smooth thumb firmly along flash and round corner, pressing third peg into place.



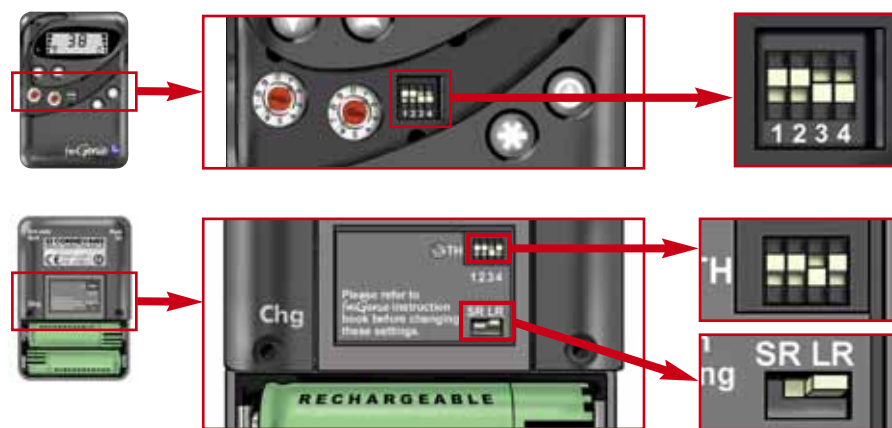
### Conventional radio aid - fmGenie transmitter default settings.

These are the default settings for fmGenie use with hearing aids.



### Phonak MLxS/MicroMLxS receivers & Cochlear implant processors - fmGenie transmitter settings.

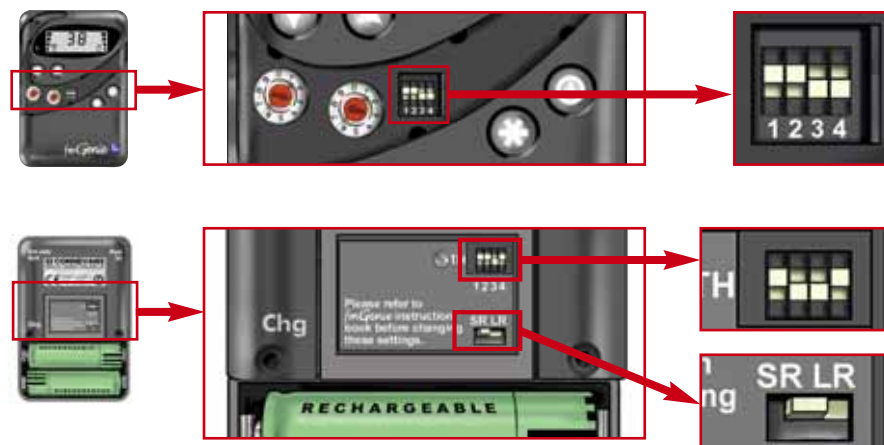
The fmGenie works well with Phonak MLxS/MicroMLxS receivers and cochlear implant processors. The normal fmGenie features are available – but the must be set to Long Range.



### fmGenie Diversity soundfield system - transmitter default settings.

The important features here are that fast AGC is selected together with microphone muting and the 50KHz euro frequency scheme.

Note: A collar, ear or head worn microphone should be used for soundfield systems to minimise the chance of acoustic feedback.



### Are you a user of technology?

More than the catalogue and more than the website – the Connevens Information Resource CD also has information sheets, product operating instructions, technical procedures, and Powerpoint presentations to help the professional.



All the fmGenie printed information is available for printing extra copies. The pdf version of this booklet is particularly useful with quick link bookmarks and search facility.

You may already have had a Connevens CD with your fmGenie? If not, please ask for a free copy with your next spares order.

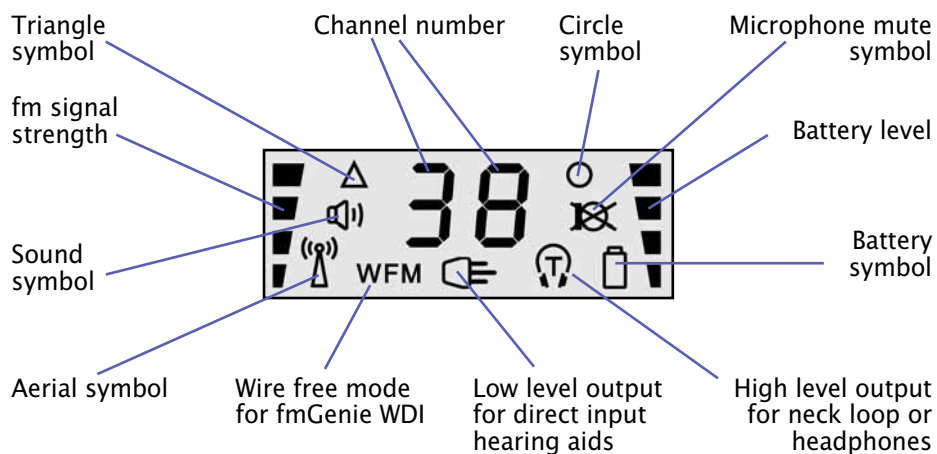


## fmGenie Receiver

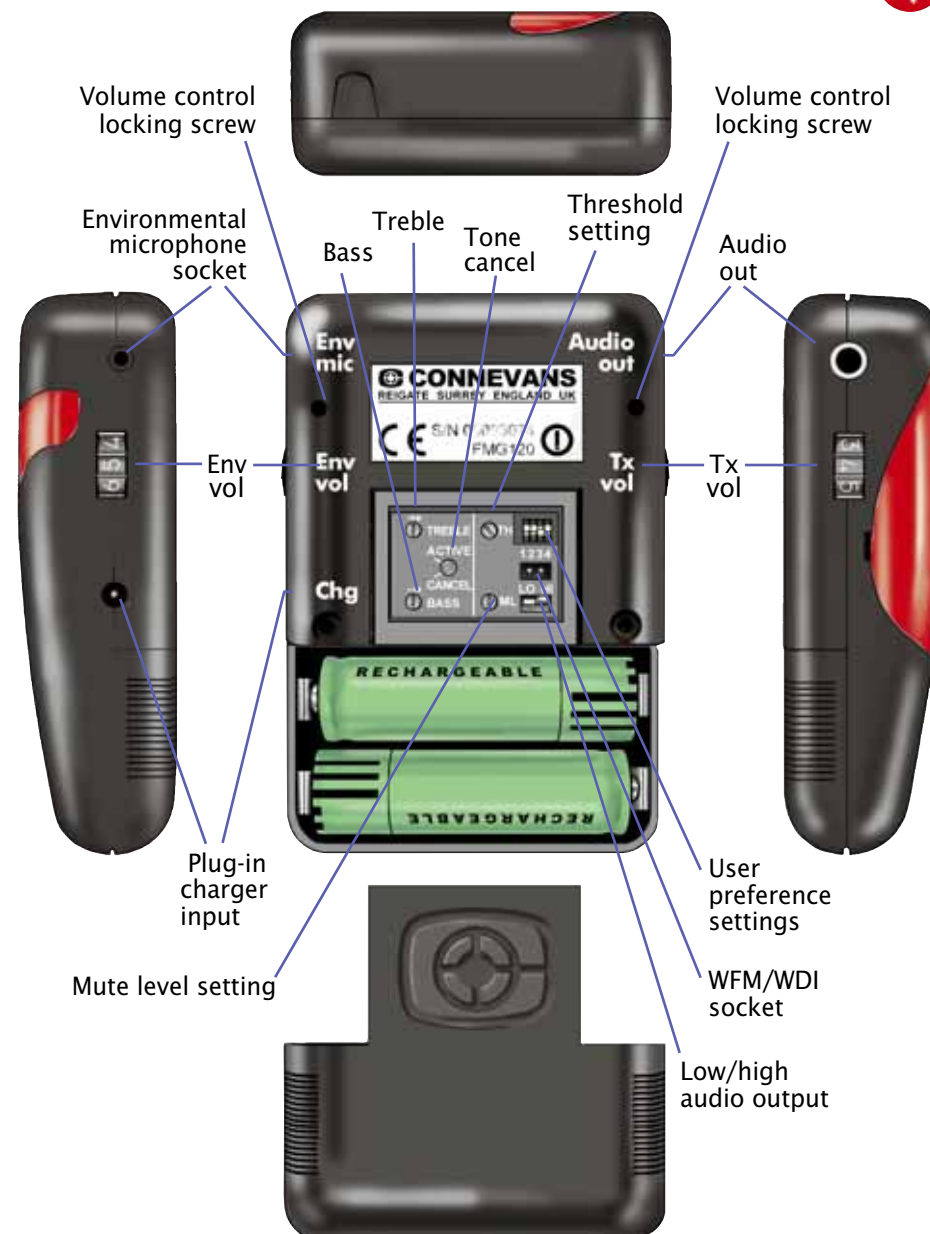
### Receiver front



### Receiver display



### Receiver top, back and sides





## fmGenie Receiver

The fmGenie receiver has a similar casing to the transmitter and is easily identified by the Rx in a red circle on the front and the two volume controls either side of the unit. An fmGenie receiver has no internal microphone.

### WEARING AN fmGENIE

The fmGenie and have similar pouch and harness options. The fmGenie with its connecting lead, loop etc. can be worn under clothing if wished.

### HOW IS AN fmGENIE USED?

The sound from an fmGenie can be listened to in a variety of ways.

#### fmGenie with hearing aids

Most fmGenie radio aid systems are used to provide an improved sound input into hearing aids. In this situation it is the hearing aids that provide the 'power' or 'gain' as well as a tailored frequency response to counteract the hearing loss.

The frequency compensation provided by the user's aid can be both matched and in some cases enhanced by the correct use of the tone controls in the receiver. The fmGenie works equally well with both analogue and digital hearing aids.

#### fmGenie with cochlear implant processors

Radio aids are widely used with cochlear implant speech processors. The problem of achieving good sound pickup is just the same for implant processors as it is for hearing aids - to provide the best quality sound input to help the 'listening process'. Each processor type has its own unique connecting lead and setting up procedure. We will not attempt to cover here the connecting options for cochlear implant processors as they vary and should initially be set up at the implant centre.



### Headphones/earphones

An fmGenie can be used with personal stereo earphones or headphones. The maximum volume is not as loud as from a hearing aid, however there is effective gain since the problems of room acoustics and 'loss of sound over a distance' are compensated for.

There are increasing numbers of people who are identified as needing help to aid concentration in lectures but who have insufficient hearing loss to otherwise require a hearing aid. The should be set to 'HI' audio output for use with headphones - this can readily be checked by looking for the symbol on the status display - see appendix 3, page 95 to select 'HI' audio output if the symbol is not displayed.



### HOW DOES A HEARING AID USER LISTEN TO THE RECEIVER?

**Direct input:** Many hearing aids have a 'direct input' facility. A 'direct input' facility is simply some form of socket or connecting plate which allows a direct connection to feed an audio signal directly into the hearing aid. Usually the connector is in a 'shoe' which clips on to the bottom of the hearing aid with an electrical connection by means of sprung contact fingers which mate with corresponding pads on the hearing aid body. The fmGenie is able to use this method of connection to a hearing aid.



**'T' Telecoil:** Most hearing aids have a 'T' telecoil facility usually associated with induction loops in halls & theatres. With the fmGenie a small loop around the neck is used instead of a large loop wire around the whole room. Analogue hearing aids usually have an O-T-M switch (Off-Telecoil-Microphone). With digital hearing aids the method of selecting the 'T' programme varies greatly between hearing aids so please consult your hearing aid user guide.



*All NHS hearing aids should have one or both of the above facilities. Digital hearing aids need to have the 'T' and/or direct input facility activated during programming. Please discuss the facilities available on your hearing aid with your hearing aid dispenser.*

## USING AN fmGENIE WITH A HEARING AID VIA A DIRECT INPUT CONNECTION



What is connected to what? The output of the receiver connects to a lead which connects to the specific hearing aid connecting shoe which connects to the hearing aid! (see illustration).

Direct input hearing aid shoes use a standard 3 pin 'europlug' connection.

If you wear one hearing aid you will require a single lead. If you wear two hearing aids you will need a lead with 2 ends known as a 'V' lead.



Direct input hearing aids tend to have a better frequency response than hearing aids on 'T'. Analogue and digital hearing aids work equally well with fmGenie equipment. With digital hearing aids, the direct input facility needs to be enabled when they are programmed. Your audiologist is able to advise on the suitability of a hearing aid and the facilities available. There is no 'best' hearing aid (or radio aid!) simply an aid which suits the user.

The should be set to 'LO' audio output for use with direct input hearings aids – this can readily be checked by looking for the symbol on the status display. See below and appendix 3 for more details.



When using direct input, environmental sound is still picked up by the hearing aids themselves. As the environmental microphone facility in the fmGenie is not required, simply ensure that the 'Env vol' control is turned down to minimum.

If a user dislikes the wires consider using a wirefree direct input (WDI) unit – details on page 46.



## USING AN fmGENIE AND A NECK LOOP WITH A HEARING AID ON 'T' OR HEADPHONES

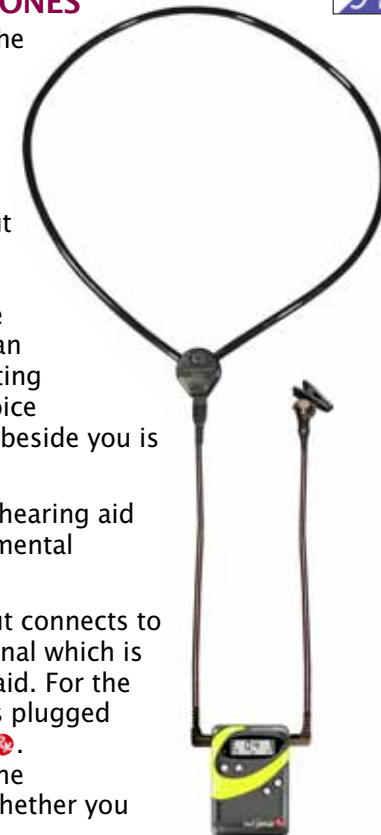


As already mentioned, you need to switch the hearing aid to 'T' in order to pick up the signal from the neck loop. Unfortunately, with many hearing aids when you switch to the 'T' position, the microphone in the hearing aid itself is turned off. The reason that we say unfortunately is because without a live hearing aid microphone users will normally be unable to hear either their own voice or the voices of those standing beside them. Whilst that may be considered to be an advantage in a lecture style situation (or sitting beside the in-laws!), the loss of your own voice monitoring and being unable to hear those beside you is usually more of a disadvantage.

The loss of 'environmental' sound with the hearing aid on 'T' is one of the reasons for the environmental microphone facility in the fmGenie .

So what is connected to what? The output connects to a neck loop which generates a magnetic signal which is picked up by the 'T' facility on the hearing aid. For the environmental sound, a lapel microphone is plugged into the external microphone input on the . It's actually not that difficult – just look at the illustration. The arrangement is the same whether you wear one or two hearing aids.

The should be set to 'HI' audio output for use with neck loops – this can readily be checked by looking for the symbol on the status display. See below and appendix 3 for more details.



## USING AN fmGENIE WITH WIREFREE DIRECT INPUT - WDI

The Wirefree Direct Input - WDI - unit combines the advantages of wirefree direct input with fmGenie features such as long range, team teaching, multiple channels, tone control adjustment and status display.

The fmGenie WDI unit plugs into a standard ear level receiver fm shoe, is powered from the hearing aid and is driven from a lightweight WDI neckloop attached to an fmGenie receiver.

The WDI neck loop may be worn under clothing without affecting the sound quality.

Because the digital signal from the WDI neck loop is **NOT** used with a hearing aid 'T' coil, there are none of the usual problems of the hearing aid picking up magnetic noise or mains hum and there is no sound volume variation with head movement.



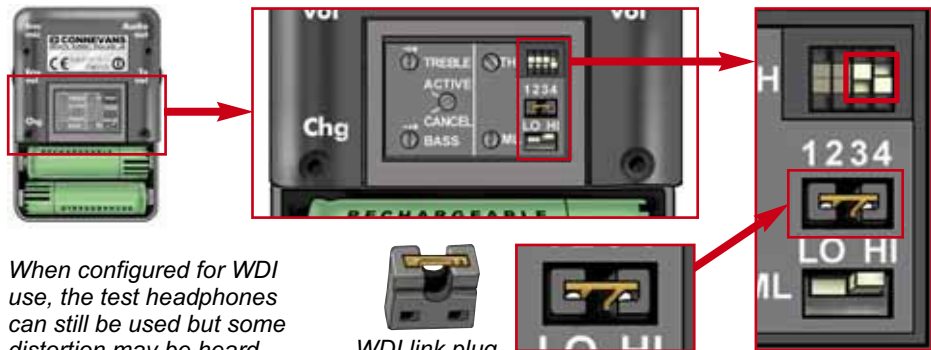
Symbol WFM will show on status display

To configure an fmGenie set the user settings and fit a link plug as shown below with the metal bar uppermost. The fmGenie 'Tx' volume control should be set to setting 6 and locked (see page 49). There is a screwdriver volume control on the WDI module to allow the user to set their own listening level/fmAdvantage.

An fmGenie environmental microphone may still be used if required but it is more usual for environmental sound to be picked up via the hearing aid itself as the WDI unit does not mute the hearing aid microphone.

An fm compatible direct input hearing aid is required to use the fmGenie WDI unit.

A silver (uncoated) paperclip is the ideal tool for removing a link plug.



When configured for WDI use, the test headphones can still be used but some distortion may be heard.

WDI link plug

## USING AN fmGENIE WITH A COCHLEAR IMPLANT PROCESSOR

Make sure the fmGenie is set to 'HI' and showing the symbol on the display. Initially set the tone controls to 'CANCEL' although these can be adjusted later to suit.

The implant centre will normally 'balance' the fmGenie for use with the processor. Once set, and the user is happy with the sound, we advise using an output level setter (see page 73) for recording the output level of the. The output level setter can be easily used to routinely check output levels or reset output levels for a replacement or repaired.



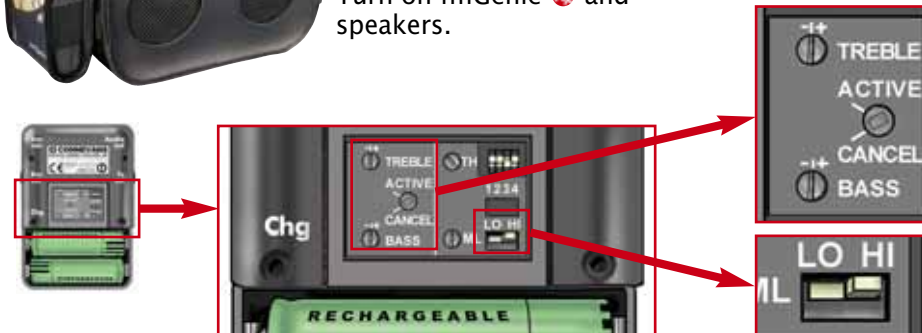
## USING AN fmGENIE WITH A PERSONAL SOUNDFIELD



Make sure the fmGenie is set to 'HI' and showing the symbol on the display. Initially set the tone controls to 'CANCEL' although these can be adjusted later to suit user. Place in belt pouch and attach to fixing strap on the end of the case.



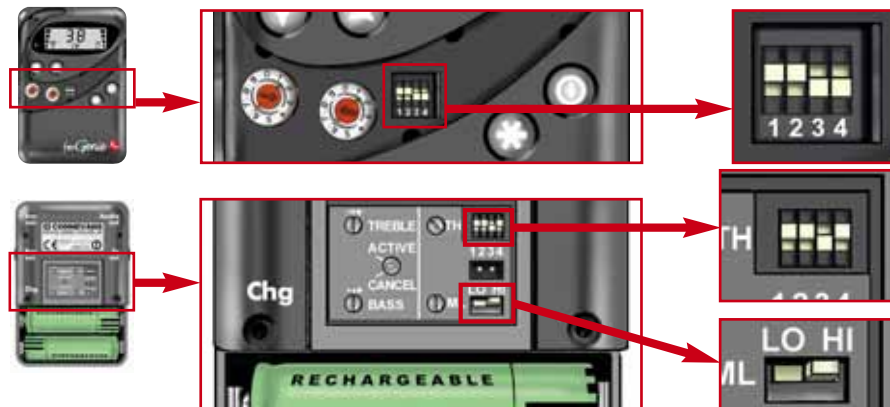
Plug speakers from the personal soundfield into the 'Audio out' socket on the fmGenie. Turn on fmGenie and speakers.





## Conventional radio aid – fmGenie receiver default settings.

These are the default settings for fmGenie use with a neck loop and hearing aid(s) or with a pair of headphones.



## FEATURES

The precise range of features available on the depends on how the user and management settings have been set. Features that have been disabled will usually show a “–” in the status display when the relevant button is pressed.

### On/off

The one control which is always available is the on/off control. As with the , turn on the fmGenie by holding down the until the alert indicator flashes and you see the status display. To turn off an fmGenie hold down the until the status display blanks. As with the , it is time rather than pressure that is required.



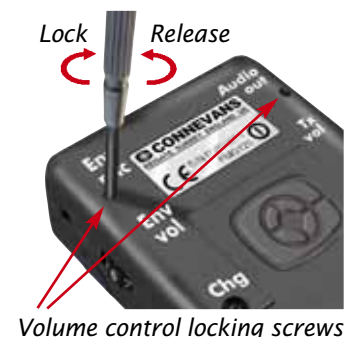
### Volume Controls

Situated on either side of the receiver are two volume controls. Once adjusted, the control(s) can be locked if wished, using a cross head size 0 screwdriver to



tighten the volume control clamp screw. A screwdriver is supplied with each . Only 1 or 2 full turns are required. Do NOT fully unscrew and likewise there is no need to make the screws overtight.

Adjustment of the ‘Tx vol’ control permits setting of the transmitter volume to an individual’s personal preference. When an fmGenie is used with hearing aids the correct setting is essential to obtain the best possible sound from the hearing aids.



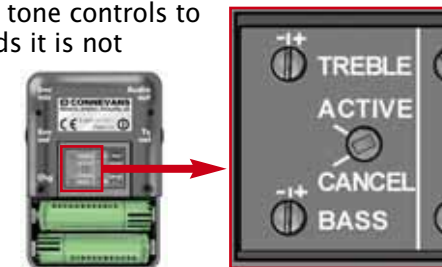
The ‘Env vol’ environmental microphone volume control is ‘factory set’ at minimum. This control should be reset in accordance with individual situations and individual preferences. It is unusual and undesirable to have the environmental sound at a higher level than that of the . The transmitter and environmental microphone volumes can be adjusted independently of each other. Both circuits have automatic gain control (AGC) to provide consistency of signal level. In the absence of a signal the receiver environmental microphone circuit is still fully operational. Any of the fmGenie microphone options can be used with the receiver, the lapel and conference table top microphones being popular ones.

## Tone Controls

(Default setting: CANCEL)

In the battery compartment are treble and bass tone controls to allow matching of the sound characteristic from the radio aid to the usual hearing aid sound. 80% of hearing aids do not require specific tone adjustment and the tone controls can be left with ‘cancel’ or flat settings. The operation of the tone controls is explained further in appendix 3, pages 96-97, but for an experienced listener it is basically a matter of personal preference.

Although normal practice is to use the tone controls to ‘match’ the radio aid to the hearing aids it is not unusual for a good listener to prefer slightly different settings. For example, reducing the bass response can sometimes reduce the effect of background traffic noise and treble boost can sometimes help with clarity for a neck loop user. So whilst a






hearing aid test box can be used for the initial settings don't forget to consider what the user prefers!





**NOTE** – In an educational environment, the setting or 'balancing' of a radio receiver to a hearing aid is usually the result of the expertise of the audiologist interacting with the personal preference of the user. In the absence of audiological support please follow the procedure in section 5.





Do not forget that the overall setting of listening level should be set on the user's own hearing aid itself.

## Changing Channel

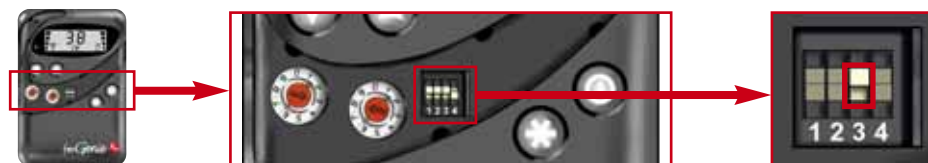
(Default setting: not allowed)

The fmGenie receiver  is a multichannel unit capable of receiving any of the approved UK narrow band radio aid channels although the unit will often be set to work on just one channel. In situations where there are more than one fmGenie, or other radio aid users, the multichannel facility should be enabled.

If channel changing is available, a triangle  flashes when the unit is turned on. Pressing either the  or  while this triangle is flashing will change the radio channel. A short press will advance down or up one channel and holding either button down will run through the channels. The channel select period may be cancelled by a short press of the  button.

Pressing both   together will select the default user channel (see appendix 1). To reduce the opportunity for 'fiddling' the channel change facility is operative for only the first minute from turning on after which the  disappears. The default channel can be used for a common channel or more usually we would suggest that the default channel be set to match the users usual  channel.


Appendices 2 & 3 explain how to set the default channel and activate the multichannel facility. Appendix 8 gives a channel coding comparison chart between different radio systems.






Move switch 3 up to activate channel changing

## fmGENIE RX DUAL CHANNEL – TEAM TEACHING

Since summer 2006, fmGenie receivers have a dual channel capability. Dual channel fmGenie receivers are identified by the part number FMG121 (previously FMG120).

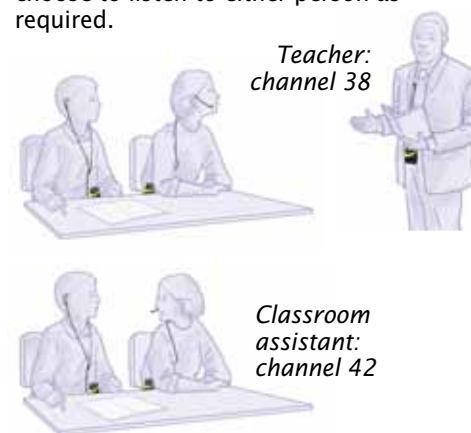
The fmGenie dual channel (dc) facility is referred to by some people as a 'Team Teaching' facility. The dual channel facility operates by allowing the user to 'toggle' between two  channels. We believe that listening to one transmitter at a time is preferable to mixing the sound from two transmitters, which could cause confusion in many situations.

Once the facility is activated, the user uses the  or  keys to 'instantly' change between the two  channels. The two chosen channels may be any in the channel set.

There are 3 prime uses for the fmGenie dual channel team teaching facility:

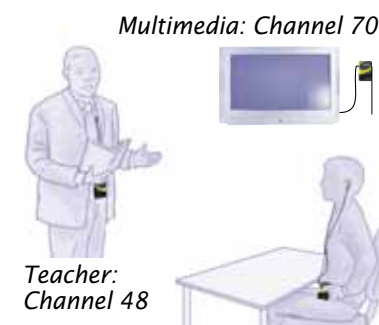
### 1. fmGenie users with a learning support assistant

Both the teacher and the learning support assistant wear transmitters on different channels, the learning support assistant preferably using a headworn microphone. The fmGenie dc user can then easily choose to listen to either person as required.



### 2. fmGenie users watching AV/multimedia presentations

Multimedia sound is increasingly used in teaching. Using two transmitters, one for the tutor and the other connected to the multimedia sound (page 67), the fmGenie dc user can then easily choose which transmitter to listen to.






### 3. In group discussion



Two fmGenie transmitters (used with their internal microphones) may be handed around the group and chosen in turn by the fmGenie dc user.



## Activation of RX dual channel facility when turning on



Hold down the  button whilst pressing  button until the display comes to life. Providing that channel changing is enabled, the display will show "dc" for approximately 2 seconds; followed by the active channel plus the  symbol will flash.






The two channels used for team teaching are the default channel plus a secondary channel. It is the secondary channel that is active at turn on, and can be changed with the  or  buttons.



Secondary channel

The channel change period lasts for 1 minute, is indicated by the flashing , and can be terminated by a short press of the  button.

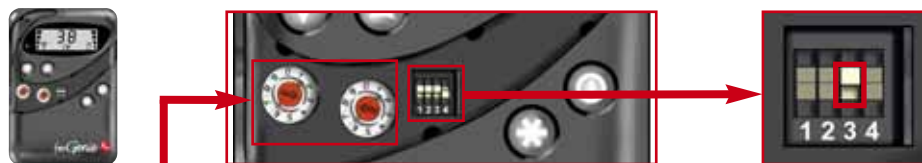
Once the  has stopped flashing, one press of the  or  button will toggle between the secondary and default channels.



Default channel

## Additional operating notes:

- The default channel is skipped during channel selection as there is no point in the secondary channel being the same as the default.
- In "dc" mode:
  - If the fmGenie was on the default channel prior to the activation of dc mode (inc. previous operation on default channel, new batteries inserted or processor reset), then the secondary channel will be two channels above the default channel.
  - If the fmGenie was last used prior to switch off on any other channel than the default, the channel shown after the "dc" display will be whatever channel was last used.



Default channel

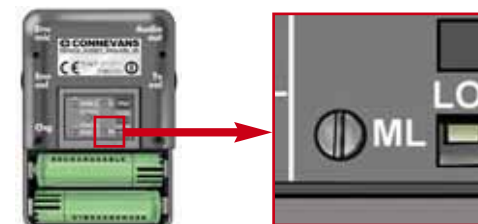
Move switch 3 up to activate channel changing

## ENVIRONMENTAL MICROPHONE MUTING

Environmental microphone muting can operate in two ways; either to mute direct input hearing aid microphones (when compatible, *see note below*) or to mute a lapel microphone when using a neck loop. There are three options: no muting (factory setting), manual muting and dynamic muting – appendix 3 explains how to adjust settings and the principle of operation is discussed overleaf.

The amount of muting is a reduction of approx. 14dB. There is a separate control for the Tx Mic Level (ML) during muting but this will only require adjusting in a minority of cases.

The potential advantage of muting the environmental microphone is a reduction of unwanted background noise pickup with a resulting improvement in signal to noise ratio (intelligibility).








Rx ML (Tx Mic Level) control showing factory setting

**NOTE:** Remote Microphone muting from the fmGenie does not operate for many digital hearing aids, however these aids often have an FM only programme – if in doubt ask your hearing aid provider.

## Manual muting

(Default setting: off)



Manual muting is operated by pressing the star function  button once. When muted, the  status display shows the crossed microphone symbol  to indicate that either or both the direct input hearing aid microphone or  external microphone are being muted. Another short press of the  button will return to normal operation. Operating manual muting will override dynamic muting when both are selected.






Move switch 4 up to activate manual muting

## Dynamic muting

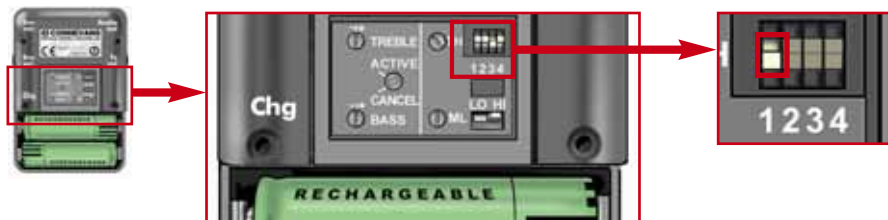
(Default setting: off)

Dynamic muting automatically mutes the environmental sound when somebody is talking into the . Somebody **talking** into the  activates muting and **stopping talking** returns to normal sound.

The aim is to give preference to the  sound but if the speaker were to ask a question of someone beside you the reply would be heard.




This facility is very good at reducing the masking effect of general background noise. However if there is a very high level of background noise the effect of this noise fading in and out may become tiresome, so it would be better to override the dynamic muting with manual muting for longer periods. A circle  on the status display shows that dynamic muting has been enabled and appears after some sound has passed through the .



Both manual and dynamic muting require self monitoring by the user. If this is an issue then both muting options can be left disabled. There are also some users who wish to have the least number of variables to worry about when using equipment.



Move switch 1 down to activate dynamic muting



## STAR FUNCTION BUTTON

Use of the star function button for manual muting has been discussed above. The  button is also used to start an autotune sequence. Autotune is an optional facility to quickly and easily tune a  to a .

Please see page 36 and appendices 2 & 3 where the autotune facility is explained further – a short press of the  button will truncate the tuning period and flashing .

## Batteries & charging

### CHOICE OF BATTERY

The fmGenie  and  both use AA sized batteries. Either rechargeable or non rechargeable batteries can be used. *Our usual advice is to use the fmGenie like a mobile phone with rechargeable batteries and in-situ charging.*

### Rechargeable batteries

Connevens supply Nickel Metal Hydride (NiMH) 1300 mAh capacity rechargeable batteries for use with fmGenie equipment – higher capacity batteries can be used but may not give a longer operating time.

NiMH batteries do not suffer from a ‘memory effect’ nor do they need to be discharged before recharge. Just as for a mobile phone; recharge when convenient – no need to wait until fully discharged.

A fully charged 1300mAh NiMH battery will last around 40 hours, can be recharged up to 1000 times and once charged will retain useable charge for up to a month. In practice you can expect rechargeable batteries to last for 2 years in service. NiMH batteries also do not require specialist recycling. Rechargeable batteries will self discharge over a period of a time.

### Non rechargeable batteries

Alkaline non rechargeable batteries are ideal for intermittent use such as for DDA applications or whenever charging might not be possible. An alkaline battery will last around 120 hours and has a long shelf life.

### FITTING BATTERIES

To fit the batteries, slide open the battery cover, the technique is a combination of ‘squeeze, thumb and wiggle’ – you won’t break it and the firm fit stops the battery cover accidentally falling off.

It is important that batteries are inserted the right way round. When using non rechargeable batteries ensure that users *never* attempt to recharge them.

To allow the processor circuitry to reset itself when replacing batteries, please ensure that you wait about 15 seconds with no batteries fitted.

*Please refer to Appendix 5 for battery handling precautions.*



## BATTERY STATUS

The fmGenie status display keeps you updated on the state of your batteries. The right side of the display features a 4 bar battery level indicator similar to those on mobile phones. The audio and radio performance of the fmGenie is the same whether the battery is fully charged or nearly flat.

- 4 bars** Fully charged, in situ charging will be rejected and 'no' will be displayed if charging is attempted.
- 3 bars** Good battery state – a top up charge would be permitted.
- 2 bars** Plan to recharge at end of day. Full charge permitted.
- 1 bar** Recharge batteries when convenient. You must recharge tonight.



### 0 bars, flashing battery symbol and red alert light

Low battery state with about 1 hour of use available. Plan to recharge or replace batteries at the end of the current session. When the red alert light stops flashing there should still be about 30 mins use left.

### Battery symbol only with the rest of display blank

The fmGenie has turned itself off to prevent battery damage – recharge or replace batteries.

BATTERY LIFE PLANNING	Charging rejected	Top up charge permitted	Plan to recharge at end of day	Recharge or replace batteries when convenient	Recharge or replace batteries at end of session
Approx. HOURS	40				1

If charging is interrupted the number of completed charging hours will be displayed (eg 5H). Press and hold the star button to clear the display or re-connect the charger to continue.

*Note that when the display is reset after an interrupted charge, the fmGenie will be 'fooled' into thinking that it has a full charge when it has not and will run down more quickly than usual.*

## BATTERY CHARGING

NEVER attempt to re-charge non-rechargeable batteries; they may burn causing personal injury or damage.

There are various options for charging NiMH batteries – 'in situ' charging is usually the best option but an external charger may also be used.

## TWIN TAIL CHARGER Part no. FMG520



Connevens recommend using the twin tail charger because the fmGenie onboard microprocessor provides intelligent control of the charging process. 'In situ' charging allows you to get the very best of performance and life from your batteries, in fact you may never need to take them out until the end of their working life.

To charge the batteries simply plug the charger into the 'chg' socket on the side of the fmGenie.

Once connected your fmGenie will safely control the charge sequence. The recharge time is approximately 10 hours for a full charge and 4 hours for a top up charge. The fmGenie can be charged when powered on or off and may be used whilst charging if wished.

It is not a problem if the recharge period is interrupted by a power failure as charging will continue when power is restored.

If charging is not required then the fmGenie will show "no" with a flashing alert indicator and battery symbol – nothing will be happening but unplug the charger as soon as is convenient.

You may give the fmGenie a partial charge. However, when you interrupt the normal charge sequence you will need to clear the display with the star button. The display will then be over optimistic about the actual battery charge state.

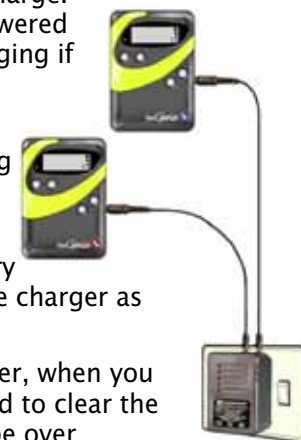
Appendix 4 explains fmGenie error messages.

**WARNING** If charging the batteries in situ, only use the correct fmGenie charger to maintain safe operation. Other types of charger may plug in but will damage your fmGenie.

## First time use of rechargeable batteries

New rechargeable batteries require charging before use. See Fast Track guide on page 5.

- 1 To fit the batteries, slide open the battery cover and insert batteries.
- 2 Do NOT turn on the fmGenie.
- 3 Plug in the twin tail charger, rolling battery bars should be visible on the right of the status display.





- 4 The equipment will be given an initial 4 hour charge – enough charge for a few days' use.
- 5 When the display goes blank the fmGenie is ready for use.

This initial charge will give at least 16 hours use, the full battery capacity will be available after the first full charge.

Connevans recommend that you recharge your fmGenie when 1 battery bar is showing. The fmGenie will in future automatically take either a full or top up charge as required.

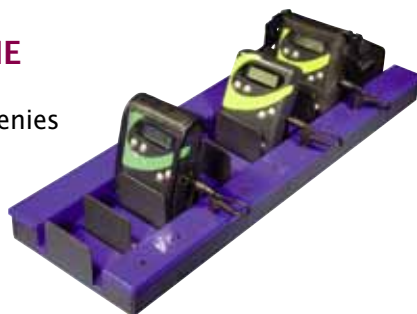
*A helpful hint: on some very rare occasions, if the batteries are totally flat, the fmGenie will not recognise that batteries are fitted and will not charge. If you have another fmGenie which is charging simply swap one battery between the charging and non charging unit. Alternatively, if you have a conventional charger, give the batteries a 5 minute charge in that.*

## MULTIPLE CHARGER FOR fmGENIE

Part no. FMG5100

For situations where there are many fmGenies to be charged regularly, it can be very convenient to use this multiple charger which allows 'in situ' charging of up to 10 fmGenies at once.

Each fmGenie is placed in a slot and plugged in. There is no need to unplug anything or to remove fmGenie units from their pouches. Each slot charges independently in the same way as a twin tail charger but with its own indicator LED. Only requires one 13amp socket.



## Routine testing & fault finding

The philosophical comments...

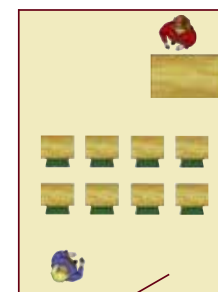
*"Only equipment left in the cupboard never breaks down."*

*"Equipment found to be not working during a routine test probably wasn't working the last time it was used."*

*"Can I afford a short time to check the equipment or can I afford a long time to repeat the lecture?"*

## ROUTINE TESTING

Ideally, two people should be involved, one at either end of the room. One person does the talking into the transmitter and the other the testing/listening, using a stetoclip to listen to the hearing aid if it is not the user themselves. If two people are not available you will need to improvise and use a radio, other sound source or perhaps give the transmitter to someone in a nearby room.



## Listening Test Kit for fmGenie

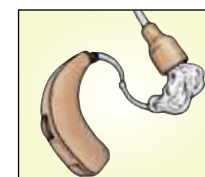
This kit is a most useful and inexpensive accessory. It is inevitable that family, friends or teachers will be faced with the statement 'my radio aid doesn't work'. The purpose of this test kit is to enable a normally hearing person to perform basic tests on both a hearing aid and an fmGenie.

The kit consists of:



The stetoclip listener is used to listen to the hearing aid directly via the acoustic earhook or by using the adaptor through an earmould.

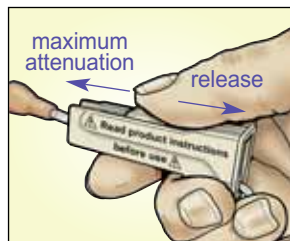
The advantage of using the stetoclip to listen to a hearing aid is that the hearing aid can be held so that not only can you hear the aid but you can see what you are doing.



Part no. FMG711



You must be careful not to listen to the hearing aid at a loud volume or you may damage your own hearing; you must use the variable acoustic attenuator. Always initially set to full attenuation before turning on the hearing aid.



## 2. Test headphones

The test headphones may be used to listen directly to an fmGenie without the complications of leads, shoes and hearing aids. Don't forget to check that the HI output setting is selected when listening via headphones.



## Routine testing procedure

As a daily routine we advise listening to the overall system via the hearing aid – non hearing aid users should use a stethoclip and attenuator to listen to the hearing aid. If a neck loop is being used it will be necessary to wear the neck loop and to put the hearing aid in the correct position behind your ear.

It is not necessary to break up the fmGenie system and use the test headphones for a routine test – if the overall system is OK then all the parts in between are too!

## Connect up the system as it will be used & TURN ON.

*Remember to check that plugs are pushed home.*

## Investigate any reported operating problems from yesterday.

Intermittent sound problems can be difficult to trace, ask the user to explain what happened and when.



## Test the overall system.



To do a thorough check we would recommend 'walking' around with the fmGenie – this is what we do at Connevens. It is important to check that the fmGenie not only gives good sound quality but also adequate 'radio range'.

Give the transmitter to a friend or place it somewhere a few metres away where it will pick up some identifiable sound and listen to the output of the hearing aid.

If you are the hearing aid user, make sure that you can hear a clear sound from the fmGenie. If you are a hearing helper, use a stethoclip and attenuator to listen to the hearing aid.

**Receiver:** Gently wiggle the cables/loop between the fmGenie and hearing aid to check that the sound does not break up or crackle. Repeat the test for a second hearing aid. *Shoe connections are a common problem – check that the shoe is a good fit and does not cause noises if it is touched. Change any suspect items.*



**Transmitter:** While still listening to the fmGenie ask your helper to gently wiggle the cables on the fmGenie, make sure that the sound does not break up or crackle. Change any suspect items.

**Battery status:** Look at each display to see that there is enough power for the time that the system will be used – but of course you did check & recharge last night! A pack of alkaline batteries can always be carried 'just in case'.



**Re-order** spares as required – always keep spare leads and shoes etc.

## Pitfalls and things to remember

Only replace or wiggle one thing at a time – that way you are much more likely to find the cause of a problem.

We strongly advise keeping a set of spare leads, shoes etc. that you know work.



Check that direct input shoes are fitting reasonably well, i.e., that they don't 'make and break' if gently nudged.

If the transmitter is too close to the receiver a weak or low transmitter signal may be missed, this is why we ask the two testers to stand at opposite ends of the room.

Don't create faults and reduce the life of equipment by 'wiggling' or pulling leads too hard or removing and replacing leads unnecessarily!




## WHAT CAN GO WRONG?

Faults more often occur in the accessories than the fmGenie transmitter  or receiver .

### On the Transmitter


#### The lapel microphone

Intermittent sound can be caused by an intermittent microphone lead – check it by trying a spare. A flashing alert indicator and  symbol on the visual display indicates a faulty aerial or microphone lead.

#### The integral microphone




Muted or muffled sound can be caused by a blocked or partially blocked microphone cover – check it out by trying an external microphone.

#### The aerial

When using an internal microphone a faulty aerial (or no aerial!) causes the received signal to crackle or break up – check it out by wiggling or trying a spare, again don't forget that flashing alert indicator and  symbol also indicates a faulty or missing aerial.

### On the Receiver

#### The neck loop or direct input lead




No sound at all may be caused by a broken lead or incorrect switch settings. (See appendix 3). Don't forget the obvious – if no output is present, check that the volume control hasn't been turned down and also check that the  symbol shows when talking on both  and  displays.

Intermittent sound can be caused by an intermittent neck loop or direct input lead – check it out by trying a spare.

*Hopefully you are now aware of the importance of holding a supply of spare parts.*

### For both transmitters and receiver

#### Batteries

A dead unit, or a unit which shows a low battery indication sooner than expected, can be caused by faulty batteries – check by trying another pair. Visually check the batteries for signs of damage and mark them in some way as suspect. If you are using rechargeables put them through the re-charge cycle once more, just in case there was a problem with charging. If in doubt the battery level can be checked by pressing the   and  buttons simultaneously to carry out a system reset.

### AND don't forget the hearing aid itself...

Just because the hearing aid works on the 'M' setting does not mean that it

will work on the 'T' setting. You can do a very basic test on the hearing aid 'T' position by using a stetoclip and moving the hearing aid near a piece of electronic equipment with a mains transformer in it. If you don't hear the buzz of the transformer the 'T' position is probably not working.



Similarly just because the hearing aid works on the 'M' setting does not mean that the direct input connection is also working – perhaps the contact plate is dirty, covered in plastic or even missing?

### Digital hearing aids



The fmGenie works equally well with both digital and analogue hearing aids.


*Note:* Digital hearing aids require the direct input facility to be configured during programming, discuss your requirements with your audiological advisor.

A 'Digital hearing aids for beginners' presentation can be found at [www.connevans.com/presentations](http://www.connevans.com/presentations)



## WHEN ALL ELSE FAILS

If nothing appears to be working stay calm! On days such as these we advise switching to the completely opposite approach. Instead of testing the overall system, use the test headphones to just listen to the fmGenie alone.

Start with as simple a system as possible, e.g. the internal microphone and an aerial, known to be good, in the  and just the headphones in the .

*Note:* With direct input systems it is necessary to change from LO to HI  to use the test headphones.

Once you know that the fmGenie system sounds OK, if you normally use another type of microphone then try that.

If you still cannot get the fmGenie working on its own, try swapping the  or  with another user to identify which unit is faulty, otherwise you will need to send both units for repair.

If you hear a good sound with the test headphones the fmGenie is definitely working, and the problem must lie elsewhere.

### Accessories tester

For those with more than one fm radio system to keep in good working order, an fmGenie Accessories Tester can be an invaluable time saver, see page 71.



## EXPERIENCED USER INFORMATION

### Fitting and balancing a radio aid with a hearing aid


When used with hearing aids it is advisable that a radio aid system should be fitted with the help of your audiologist who will have the correct testing and assessment facilities. As fitting involves the balancing/setting of both the volume and tone controls, it is also necessary to repeat the balancing process or use an output level setter when a radio aid is returned from servicing.

It is, however, not unusual for the equipment to be set up by an experienced hearing aid user without the help of a qualified audiologist. The following is a guide for setting an initial listening level for a radio aid system.

#### Objective

On the assumption that a hearing aid user is happy with their hearing aids (if that assumption is not true then you should sort that out first!) we do not wish to change the hearing aid listening level when listening via the fmGenie. *Very simply, the objective is that the sound heard at a distance from the fmGenie transmitter should be similar or slightly louder to the sound heard from the hearing aid on its own at close range in a quiet room.*


#### Procedure

- 1 Fit a new battery and check that the hearing aid is in working order – normally hearing people should use a listening test kit for listening to the hearing aid – see page 59.
- 2 Check the current tone settings for the . In the absence of other information, set the 'ACTIVE/CANCEL' switch to cancel; this setting should suit approx. 80% of hearing aids – appendix 3 shows how to do this.
- 3 Get a colleague to stand at arm's length from you. Listen to the hearing aid on 'M' and adjust the hearing aid volume to give a comfortable listening level. This listening test is best done with the hearing aid behind the ear in order to replicate how it is used in reality. For the duration of the remainder of this test do not readjust the hearing aid volume control.




As a word of warning, do not use your own voice to set the hearing aid volume. This is because you would be talking too close to the hearing aid microphone and will hear yourself partly by bone conduction.



- 4 Ask your colleague to stand just outside the room (this will separate the environmental sound input from the  sound input) and talk to you with a natural voice, with their mouth at the usual distance of 150mm from the microphone.

Now you have established a listening level for the hearing aid alone, connect the fmGenie as it will be used and continue with step 5.

#### Direct Input or cochlear implant

- 5a Adjust (balance) the transmitter volume control (Tx vol) on the , so that the volume of your colleague's voice sounds similar or slightly louder than when they were standing at arm's length from you.




Be careful not to overbalance hearing aids that have Wide Dynamic Range Compression. Although the aid will adjust itself there will be an increased level of background noise and loss of quality. Always adjust by turning the volume upwards, if necessary turn the volume down and slowly back up again.

*If you are using an fmGenie WDI then the Tx volume should be locked at 6 and you should use the screwdriver adjust on the WDI unit itself.*

#### Neck Loop


- 5b The neck loop generates a polarised (directional) magnetic signal and the orientation and position of the hearing aid relative to this loop affects the hearing aid sound. We would suggest that the best method of 'getting it right' is to wear the neck loop around your neck (!) and to wear the hearing aid behind your ear as it would normally be worn.



With the hearing aid set on 'T' (sorry, that probably meant that you had to remove the hearing aid from behind your ear!) adjust (balance) the transmitter volume control (Tx vol) on the  so that the volume of your colleague's voice sounds the same as when they were standing at arm's length from you.



Now connect a lapel microphone to the receiver 'Ext mic' socket, adjust the 'Env vol' so that you can hear your own voice, but at a level that leaves your colleague's voice dominant.

- 6 In noisy situations the amount of environmental background noise can mask the sound from the  with a reduction in speech discrimination. It is in these situations that the manual muting facility will be of help to users, see page 53.
- 7 Try the system using a standard listening test, readjusting both the volume and tone settings to suit the user's preference. Evaluate the effectiveness of the system by comparing word list scores with and without the fmGenie.

The foregoing is intended to be a basic guide only. Your hearing advisor would use a hearing aid test box to help initially establish these settings.



Once you are happy that the system is correctly balanced, use an output level setter to record your output levels – see page 73. Good luck.

*The Connevans fmGenie will not resolve all the problems of hearing aid users but it will allow better use of hearing aids and allow listening at a distance with increased clarity and reduced background noise.*



## Connecting an fmGenie transmitter to external equipment

### fmGENIE TV CONNECTION


Much better sound quality will be obtained by feeding the sound directly into the  rather than by placing the microphone next to a speaker. A good example is watching TV in a room full of people. For the hearing aid user the level of background noise could possibly be as loud as the soundtrack. By feeding the sound directly from the video or TV into the  it is possible to eliminate unwanted background noise.


An fmGenie TV SCART add-on accessory pack (FMG9PK01B) provides the necessary items for connecting to a TV/Video SCART socket.






FMG9PK01B contains a 5m lead (\*A121BA\*) and a SCART adaptor (\*T114J\*).





### How does it work?

On the fmGenie  there is a TV Aux level input marked 'Aux in'. Plug the single end of the lead into the 'Aux in' socket and the double end into the two audio input sockets on the SCART adaptor. Check that the SCART adaptor is set to 'OUTPUT' and then plug into the SCART output on the TV or video.

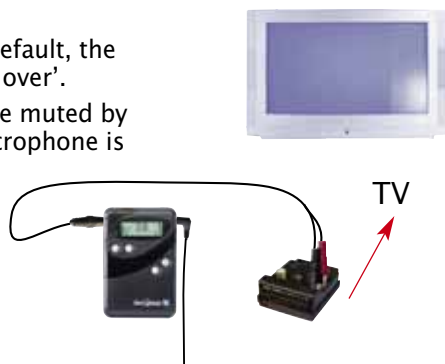
When using the TV level 'AUX' input, by default, the  microphone remains live to allow 'talk over'.

We recommend that the  microphone be muted by pressing the  button once. A muted microphone is shown by a flashing  on the  display together with a flashing alert indicator as a warning that the microphone is muted. Pressing the  button again will remove the muting.


If manual microphone muting is not being used you will need to take care where you place the fmGenie .

when connected to the TV because its microphone will still be live. In this case either move the  away from the loudspeaker or use an fmGenie transmitter stereo input adaptor, instead of the direct 'AUX IN' connection, which will mute the microphone by default.

*Note: If your TV has phono audio out connections, use those in preference to the SCART as there will be no issues with the SCART socket configuration.*



## fmGENIE MULTIMEDIA/AUDIO CONNECTION

For hearing aid users who wish to listen to audio equipment such as computers, CD, minidisc, iPod etc, a much better result is obtained by connecting the  directly to the equipment rather than placing the microphone near a speaker.

The fmGenie Multimedia/Audio add-on accessory pack (FMG9PK02) gives you the means to connect to a wide range of audio equipment.



FMG9PK02 contains an fmGenie transmitter input adaptor (FMG81) plus a pack of assorted leads to fit most requirements (FMG81PK) and instruction sheet.



FMG81



### The transmitter input adaptor

The transmitter input adaptor is a small box with a volume control and scale. There is also one trailing lead with a 2.5mm plug and one 3.5mm stereo jack socket.

The transmitter adaptor converts the stereo audio signal to mono, reduces it to a level that will be accepted by the fmGenie and mutes the  microphone. The volume control will allow you to set the volume into the  from your equipment.


The fmGenie transmitter input adaptor will accept a wide range of inputs ranging from low level auxiliary outputs, headphone outputs, line level outputs to speaker drive outputs.


### Connecting Up

- 1 Select the correct lead for the audio equipment you want to connect to – see next page for more details on the choosing leads.
  - 2 Set the input adaptor volume control to a low setting.
  - 3 Plug the flying lead from the transmitter input adaptor into the external microphone 'Ext mic' socket on the  – this will disconnect the integral microphone in the .
  - 4 Plug your chosen connecting lead between the audio equipment and the 3.5mm stereo socket on the transmitter input adaptor.
- Make sure that you understand which output to use from the audio equipment sound source – some are fixed level, others are adjustable and some outputs, such as a headphones socket, will disconnect the speaker.
- 5 The system should now work. The volume control will allow you to adjust to the output level from your sound source.



## Setting the volume level

- 1 Use your listening test kit to listen to someone speaking into the  microphone as usual. (This is done with the i/p adaptor unplugged and using a lapel microphone or aerial).
- 2 Connect the transmitter input adaptor into the fmGenie 'Ext mic' socket.
- 3 Adjust the transmitter input adaptor volume control to match the level heard from the microphone.
- 4 Lastly, make a note of the setting of the volume knob for next time.

*Note: The Transmitter input adaptor also works equally well in the environmental microphone socket on the  and, when used in this way, it allows input from two sources at once to be mixed, eg computer and lecturer.*

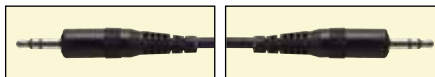
## The pack of leads

Part no. FMG81PK

Allows connection to a wide range of electronic equipment. The pack contains the following leads:

### Stereo 3.5mm plug to 3.5mm plug

Will fit any 3.5mm headphone socket (we have no control whether it does or does not cut out the sound to the speakers).



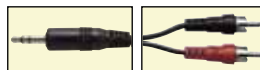
### 3.5mm socket to 6.5mm plug

Converts 3.5mm plug to 6.5mm plug which will fit into 'big' headphone sockets.



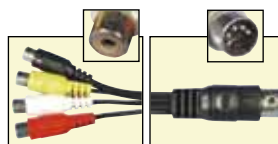
### 3.5mm stereo to 2 x phono plugs

Phono connections are found on many hi-fi's & sound systems.



### 4 x phono sockets to 5pin din plug

For connecting to some tape recorders, used with the 3.5mm to phono lead, probably black to black, red to red. (Some equipment may prefer the yellow & white but the worst that can happen is a funny noise.)



### 3.5mm socket doubler

Converts one 3.5mm socket to two 3.5mm sockets.



## fmGenie Conference Microphone



Part no. FMG22PK1

Many users of fmGenie radio aids use their system in group or seminar situations. Whilst it is not possible to replicate the same quality obtained from a microphone worn on the person, the Connevans fmGenie conference microphone successfully increases the distance of useful sound pick-up.

The fmGenie conference microphone is a flat metal disc 88mm in diameter with a grey finish. It works on the boundary layer principle and is intended to be placed in the centre of the 'conference' table.






### Using with a transmitter

The simplest way to use a conference microphone is for it to be connected to the transmitter  and placed in the centre of the table. The microphone is connected to the 'Ext mic' socket of the .





*Transmitter and conference microphone in centre of table*

### Using with a receiver

Using the fmGenie conference microphone with an extension lead to the receiver  leaves the  free for use by the discussion moderator – who may well stand up from time to time to use display material. When used in this way it will be necessary for the user to readjust the 'Env mic' volume control as required. The conference microphone is connected to the  'Env mic' socket.



*Conference mic plugged into receiver, presenter wearing transmitter*



You can also use two conference microphones – one on the  and one on the , perhaps to cover discussion around a long table.

### Getting the best out of a conference microphone

The microphone uses the flat surface of the table to help 'collect' sound. Because the sound travels along the table surface you will find that table cloths, flowers or piles of books will noticeably reduce the effectiveness of operation and should be avoided. Likewise, although the fmGenie conference microphone will work if placed on one classroom desk amongst a group of desks, this is less effective than having the group around one central table with the conference microphone in the middle.

The fmGenie conference microphone works well with people talking at distances of between a half and a 2 metre radius from the microphone. It is important, however, to ensure that background noise is kept to a minimum because the conference microphone (like any microphone) picks up all sound and is unable to differentiate between wanted and unwanted sounds. Some users may gain benefit by using the conference microphone at distances greater than 2 metres if the background noise is minimal and the room acoustics are good. It is also makes sense to plan ahead to avoid unnecessary background noise around the table – such as offering a side table for coffee cups!

The conference microphone is not effective in reducing the problem of background noise compared with when the fmGenie is used conventionally. Therefore, it will be necessary to consider restricting the use of a conference microphone to 'quiet' rooms with good acoustics.

Both the fmGenie  and  offer a choice of two Automatic Gain Control (AGC) characteristics for their microphone input, slow or fast. Slow is the normal setting for use with lapel microphones however the fast AGC is often better for use with a conference microphone where table noise can temporarily 'knock out' the sound – see appendix 2 & 3; battery compartment switch 2 should be set down.

The suitability of an fmGenie conference microphone is very much a question of personal choice for the user – so in practice there is no substitute for trying it!

Part no. FMG22PK1 includes an fmGenie conference microphone, pouch and 2m extension lead.

Please note: using the extension lead on the transmitter may affect the operating range so always check reception before the session starts.



## fmAdvantage protocols for using a hearing aid test box to set up hearing aids for use with fm radio systems.

There are four fmAdvantage protocols covering linear and non linear hearing aids connected to a radio aid by direct input or neck loop. The fmAdvantage procedures were developed in conjunction with Manchester University.

The fmAdvantage procedures are available for download from [www.connevans.com/information](http://www.connevans.com/information) and in a printed booklet. A PowerPoint presentation is also available on the Connevans information resource CD. If you would like a copy of the CD or printed copies of the fmAdvantage procedure please request them with your next order.



## fmGenie Accessories Tester

Part no. FMG750

The fmGenie Accessories & MLxS Tester will functionally test: a direct input lead when connected to a radio aid; a WDI, MLxS or other ear level receiver; an fmGenie aerial; fmGenie & CRM-220 microphones.

### Fault finding

Fault finding is a process of elimination and substitution – using the tester allows easy verification that individual parts of an fm system are working, allowing the faulty item to be replaced and

systems returned to full working order very quickly. In fact, the fmGenie accessories tester is an indispensable product for both Teachers of the Deaf and carers.

### What can be tested

The FMG750 accessories tester drives a standard pair of headphones (or neckloop/DPV direct input lead for hearing aid users) and allows the user to listen to: fmGenie aerials, fmGenie or compatible microphones, wireless ear level receivers (such as MicroMLxS, WDI etc.) and direct input leads when connected to a radio aid.

### Setting up

Plug the headphones (or neckloop/DPV direct input lead for hearing aid users) into the 3.5mm socket at the side of the tester.

### Testing

When testing leads, gently wiggle or bend them. Intermittent connections will cause bad crackling and/or interruption of sound. No sound indicates that the item is broken and needs replacing.

**IMPORTANT:** Be cautious turning up the listening volume of the fmGenie accessories tester, always start from minimum. If the lead being tested is intermittent, it may produce loud crackling.



### Testing fmGenie Aerials

Plug the fmGenie aerial into the 2.5mm socket A. The fmGenie accessories tester contains an internal audio tone generator that sends a signal through the fmGenie aerial.







### Testing Microphones



fmGenie style (or microphone with a 2.5mm jack plug) – Socket A

Plug in the microphone, talk into it yourself at the normal distance from the mouth. Listen to the tester and increase the volume until sound is heard. Wiggle and bend leads as before.

Connevens microphones have a detachable head which rarely fails so we advise trying a replacement lead before failing the whole microphone.


### Testing direct input leads connected to a radio aid

The radio aid system should be turned on and the direct input lead connected as normal.



Instead of plugging into the direct input shoe on the hearing aid, plug the 3 pin Europlug into socket B of the tester. Place the  near a source of sound and listen to the tester, increasing the volume until sound is heard. Then walk away from the  to a realistic operating distance. Gently wiggle the lead as before. If there is a problem, as part of the elimination process, replace the direct input lead with a known good one and listen again.




### Testing Ear Level Wireless Receivers


To test ear level receivers, a known working  on the correct channel is required. The ear level receiver should be plugged into the tester.



Turn on the ear level receiver and . Place the  near a source of sound and walk away from it to a realistic operating distance. Listen to the tester and increase the volume until the audio from the source can be heard.

Gently squeeze the ear level receiver to check whether there are any intermittent connections causing crackling or broken sound. If there is no sound, then either the ear


level receiver is broken or the  is not working.



NOTE: If testing an fmGenie WDI unit, make sure that the fmGenie  is configured for WDI operation and that the WDI unit (fitted to the tester) is held vertically within the field of the WDI neckloop.

*Fault finding is a process of elimination and substitution, having more than one fault is potentially the most confusing situation. Using the tester allows easy verification that individual parts of an fm system are working or not. To avoid confusion always replace or wiggle one item at a time. If you have access to known working items, try substituting them one at a time. Sometimes it may be helpful to borrow items from another user, listening to their transmitter can help clarify what is working.*

## Output Level Setter

The output level setter is an easy to use time saver as it will allow the precise output level volume for a particular user to be recorded.

The fmGenie output level setter can be used by a 'non audiological expert' to routinely check output levels or to reset output levels for a replacement or repaired . Please note that it is also necessary to note or check the tone control settings (see appendix 3, page 97). An output level setter is particularly useful for radio aid systems used with cochlear implant processors.

**Connection** The output level setter has two leads. One lead has a 2.5mm jack plug which plugs into the fmGenie external microphone socket (Ext mic) on either the  for the 'TX vol' setting, or on the  for the 'Env vol' setting, as required.

The second lead connects to the 3.5mm  'Audio out' socket.



When taking fmGenie readings with an OLS it is always necessary for the audio output 'LO/HI' switch to be set in the 'HI' position. If the fmGenie is being used with direct input hearing aids don't forget to return the 'LO/HI' switch back to the 'LO' position afterwards.

**Operation** To take a measurement, turn on the units and note the OLS display reading.

When resetting equipment, adjust the appropriate volume control to obtain your required reading – do not forget to check the tone control settings too.

For the technicals among us, the output level setter (OLS) consists of a precision stable signal generator and an rms voltmeter – for the non technicals, it consists of a black box with a number readout on it which needs to have its calibration checked by Connevens each year!

## Using the fmGenie with the telephone

Hearing aid wearers who already benefit from an fmGenie radio system can also use their fmGenie to enjoy much clearer phone conversations.

There are two ways to use the fmGenie with a telephone; with a telephone listening adaptor (FMG9PK04B) or with a high quality hands free headset pack (FMG9PK05).

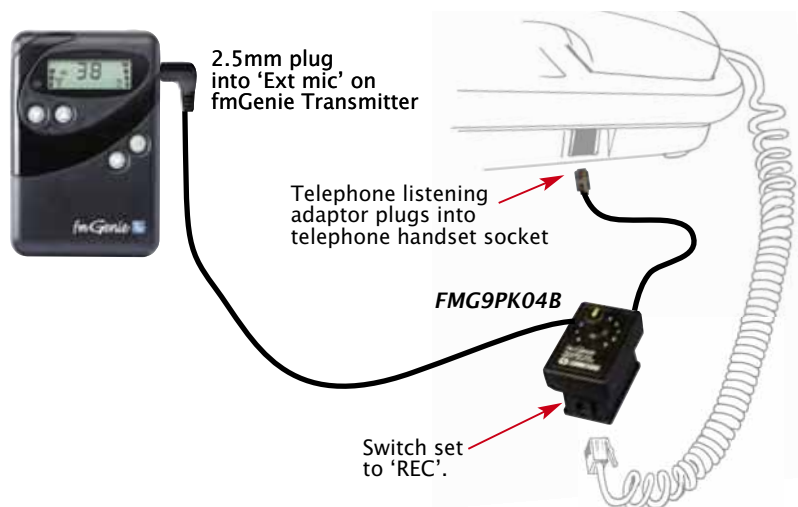
### FOR USE WITH A HANDSET AT HOME OR WORK

Part no. FMG9PK04B

**With this add-on pack, the phone conversation from your corded phone can be fed directly into your hearing aid via the fmGenie and .**

The phone adaptor has its own volume control and plugs into the 'Ext mic' socket.

*Consists of a telephone curly cord listening adaptor with volume control and connection to fmGenie plus instruction sheet.*



### FOR USE WITH A HEADSET AT WORK

Part no. FMG9PK05B

**Connecting an fmGenie radio system into a telephone offers the best possible quality of telephone sound for hearing aid users.**



This add-on pack provides a high quality hands-free telephone/telesales facility which may literally make the difference between being able to work or not. Suitable for use with virtually all telephone systems, both analogue and digital. The use of a headset microphone leaves the hands free for keyboard entry.

Includes a transmitter input adaptor (FMG81), a T-Call base adaptor (40THTCALL) and a SupraPlus monaural headset (40THSPMH) and instruction sheet.

The transmitter input adaptor has its own volume control and plugs into the 'Ext mic' socket.



## fmGenie Questions & Answers

The following is a selection of useful information in the form of questions and answers



**“How can I tell if an fmGenie system is working OK?”**

Use a hearing aid stetoclip tester to listen to the overall system through the hearing aid – see page 59.

**“Does the fmGenie system work well with digital hearing aids?”**

Yes.

**“Do you have any introductory information on digital hearing aids?”**

[www.connevans.com/presentations](http://www.connevans.com/presentations) has view our ‘Digital hearing aids for beginners’ presentation.

**“The direct input lead pulls on the hearing aids.”**

Use a WDI unit or order some longer ones, lengths up to 1.5 metres are available!

**“I can’t move the volume controls on the receiver?”**

There are clamps to lock the controls when set – see page 49 on how to release them.



**“I have activated the microphone mute facility on my receiver but I can still hear the transmitter”**

Ah, we are divided by a common language. The microphone mute button on the transmitter mutes the transmitter microphone and the receiver mute button mutes the receiver or hearing aid environmental microphone.

**“Does the receiver environmental microphone mute work for all direct input hearing aids?”**

No – it depends upon the direct input hearing aid design.

**“What do I do if my fmGenie has a fault, although it does work some of the time?”**

Write down a description of the intermittent fault (intermittent faults are the most difficult for us to find). Return the defective equipment to your adviser or Connevans as appropriate.

**“Does the system need routine servicing?”**

No.

**“My transmitter has a flashing  $\Delta$  on the display when I first turn it on which disappears after a while, why?”**

The flashing  $\Delta$  indicates that channel tuning is available.

**“Do I have to wait for the  $\Delta$  to disappear before the fmGenie tuning functions lock out?”**

No, a short press of the  $\text{Ⓢ}$  button will end the channel select period.

**“Why does the display show ‘- -’ with a flashing LED when I press a button?”**

The function you are selecting is disabled.

**“The transmitter UP/DOWN  $\text{⬇}$   $\text{⬆}$  channel change buttons do not work, why?”**

Most transmitters are used on specific frequencies with disabled  $\text{⬇}$   $\text{⬆}$  controls – see appendix 2, page 87.

**“My transmitter turned itself off, why?”**

It is possible that the auto power off did this. Check that the sound symbol  $\text{🔊}$  shows on the transmitter status display when someone is talking, if not readjust the TH control – see appendix 2, page 90. Also check the battery status.

**“I altered one of the user preference settings in the battery compartment but it doesn’t seem to have done anything, why not?”**

Some of these settings only come into force once the fmGenie is turned off and then turned on again. Some people find it easier just to make any changes while the fmGenie is turned off.

**“On the fmGenie transmitter the alert indicator is flashing, the display has a flashing aerial symbol and no aerial bars are showing?”**

This indicates a faulty (or missing!) microphone, lead or aerial.

**“The hearing aid does not seem loud enough”**

Check the output volume, that the correct output mode (LO-HI) is selected and that the volume control is correctly set. If there is still a problem test the



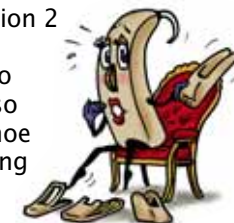
system in a hearing aid test box. If not satisfied get the suitability of the hearing aid re-assessed.

**“I would like to use direct input – how do I find out what type of shoe will fit my hearing aid?”**

Look in the Connevans Catalogue. Section 2

has an easy to identify guide to shoes which also shows which shoe fits which hearing aid.

Alternatively, use the search facility on [www.DeafEquipment.co.uk](http://www.DeafEquipment.co.uk) and put in your hearing aid type – it should then show the correct shoe.

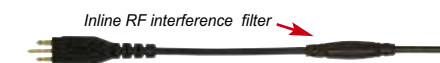


**“There is a lot of background noise – what can I do?”**

Try using the manual mute facility to reduce the amount of noise picked up by the hearing aid and/or environmental microphone – page 53. Also check that the listening volume controls are correctly set.

**“Since I have got new digital hearing aids I sometimes hear a ‘sshhing’ noise from the receiver when the transmitter is turned off”**

The computer chip in some digital hearing aids can cause noise interference to the receiver. Direct input leads with inline RF interference filters are available – see page 27. Also, avoid turning off the transmitter and use the transmitter microphone mute facility instead.






**"I get funny noises when near to a computer/ light fitting/ power line etc... when my hearing aid is on 'T'."**

Is the interference picked up by the hearing aid? Switch off the fmGenie receiver – if the noise is still present, the interference is being picked up by the hearing aid. Try the hearing aid on 'M'; if the interference is only present with the telecoil pick-up then it may be possible to use a direct input type of hearing aid. Otherwise the only answer is to try to move away from the source of interference.

**"I can't hear anything through my test headphones but the speaker symbol shows on the display."**

Check that the  symbol is showing, if not you have a wrong switch setting – see page 95.

**"I am not hard of hearing myself and I find it difficult to be certain that a hearing aid is working correctly. What would you suggest?"**

Use a hearing aid stetoclip tester from a listening test kit and don't forget to check that the user's earmoulds are not blocked with wax.



**"When using a stetoclip to listen to a hearing aid I am unable to listen with the aid at the same volume as my daughter – any suggestions?"**

Yes, use a stetoclip tester with a variable acoustic attenuator – see page 59.

**"Should a radio system be tested in a hearing aid test box with the hearing aid as part of regular assessments?"**

Yes – details are on the Connevens website, look for the fmAdvantage procedure.

**"Can a radio system be used with every type of hearing aid?"**

Most of them, all aids with direct audio input or inductive pick-up ('T') coils.

**"My young child 'fiddles' with the volume controls – what can I do?"**

Lock them, see page 49.



**"Can the radio system be connected to a TV, radio, CD, minidisc, etc?"**

Yes, it's easy – see pages 66-67.

**"Can I use the radio system in my car?"**

Yes – but you may get some interference, why not try it?

**"I have trouble in meetings hearing the discussion – any suggestions?"**

Try a table top conference microphone (Part no. FMG220) – see page 69.



**"Should I permit manual channel changing in a transmitter?"**

No – as you do not want the chance of having more than one transmitter on the same channel.

**"Who would ever permit manual channel changing in a transmitter?"**

An LSA using team teaching with more than one pupil or to allow a visiting teacher to use their transmitter on different channels in different schools.

**"Who would find auto tune useful?"**

A school for the deaf where the transmitter stays in a classroom and the students move from class to class and need to change channel frequently.

**"I have done an auto tune and the receiver has not locked on to the transmitter."**

Was the transmitter channel display flashing while you were trying to tune? Were you close enough (within 2 metres for a Tx with SR selected)? Did both the Tx and Rx have their aerials/leads connected?

**"Is the system waterproof?"**

No – only splashproof.



**"The  $\Delta$  is flashing and I can hear a high pitched whistle on the selected channel."**

You have activated autotune and you can hear the 'permit to tune' data signal from the transmitter that allows the auto tune function to work. Briefly press the on/off on the Tx and it will go away. More importantly recheck that you have only the features that you require enabled.

**"I have changed the default channel settings but the channel display has not changed."**

You need to turn an fmGenie OFF and ON again after changing user and preference switch settings, have you done this?

**"How many radio channels are available?"**

All channels that you are permitted to use by the DTI (currently 35).

**"I find changing between 50KHz euro frequencies and the traditional channels fiddly, any suggestions?"**

It sounds like you are trying to use both schemes on the same site. The system is not designed for daily changing. This is a really bad idea. You MUST only use one channel scheme. Seek guidance from the fmGenie helpline without delay!

**"Can two systems on the same channel be used in the same school?"**

Yes – subject to a separation of a length of over three football pitches!

**"What happens if I have two transmitters on the same channel in the same area?"**

You will hear a most awful wailing whistling tone on receivers.

**"Can the system be used in sporting activities (camping, skiing, canoeing, etc)?"**

Yes – but please use with care as the system is only 'splash proof' (we suggest sealing in a polythene bag for added protection).



### “Can I use more than one receiver with one transmitter?”

Yes – your local radio station does not limit the number of radios that can listen to their programmes!

### “What is the range or coverage of the fmGenie?”

The area of a football pitch, more with long range selected.

### “How powerful is an fmGenie?”

An fmGenie radio aid is usually used in conjunction with a hearing aid; it is the hearing aid which provides the ‘power’ output.

### “Do you have simplified information for classroom teachers?”

Yes – encapsulated tutor information cards are available – visit [www.connevans.com/fmgenie](http://www.connevans.com/fmgenie) or order some when you are next ordering spares?



### “Do you provide simplified information for carers?”

Yes – encapsulated morning & evening checklist sheets are available – visit [www.connevans.com/fmgenie](http://www.connevans.com/fmgenie) or order some when you are next ordering spares??



### “Can fmGenie units be used with another manufacturers’ equipment?”

Probably – as long as they use the same transmitter audio emphasis characteristics.

### “Can I use the system abroad?”

Probably yes – you may require a transmitting licence (enquire at the relevant Embassy) The UK battery charger is 220V 50Hz. It is possible to get a 110V charger.

### “How long do the NiMH rechargeable batteries last when in use?”

Typically 40 hours for both fmGenie transmitter and receiver.

### “What is the life of rechargeable batteries?”

Between 1 to 2 years.

### “How long do non-rechargeable alkaline batteries last?”

Typically 120 hours for both transmitter and receiver.

### “What is the cost of recharging the batteries?”

A few pennies per month!



### “For how long will the battery retain useable charge?”

For around a month.

### “Should I recharge my fmGenie every night?”

No. This is not necessary and will reduce the life of your batteries.

### “Why, when the fmGenie is charging, do only 2 bars roll?”

A top up charge is being given.

### “How does the battery level indicator work?”

The indicator works very much like those on mobile phones – see page 56.

### “The battery level on the display increased a few minutes after I switched on?”

This is not a problem, it is simply a characteristic of rechargeable batteries.

### “When is the best time to recharge my fmGenie?”

Check the indicated battery level before turning off after a period of use. If the display shows 2 bars or less, plan to recharge overnight.

### “Does the volume of the fmGenie reduce as the battery level drops?”

No. The fmGenie design ensures that there is no change in volume whatever the battery level – the fmGenie automatically turns itself off when the battery level is too low.

### “I put an fmGenie on charge last night and the display showed ‘2H’ when I came in to work, why?”

The ‘2H’ indicates that the fmGenie has had about 2 hours of charge before the charger was disconnected – has somebody unplugged or turned the charger off? Pressing the star button will clear the display (but see page 57).



### “While my fmGenie was charging it felt warm, is this a problem?”

No, don’t worry, during in-situ charging the unit may become warm to the touch. This is normal.

### “I plugged my charger into an fmGenie and the display indicated ‘no’, what does this mean?”

The ‘no’ indicates that the batteries do not need charging – see Appendix 4 & page 57.

### “What should we not do with the batteries?”

Do not put batteries loose in pockets or bags; if the battery terminals are shorted out by coins or metal clips the battery will be damaged and maybe the user too!

### “Do I have to purchase batteries only from Connevans or can I buy them elsewhere?”

They can be bought elsewhere – but we recommend the type which we supply (some of the alternative re-chargeable types, although cheaper in price, hold less charge).

### “Can I use rechargeable NiMH batteries with higher capacity to give more operating time?”

You can use them but you probably won’t get any longer operating time because the charger is designed for 1300mAh batteries.

### “Having got an fmGenie, what do I do and how do I know that the system is working correctly?”

Reading this booklet is good – most of the answers are here. In the end, the hearing aid user is the ultimate judge of a good system.

### “How do I get my fmGenie repaired without knowing how much money to send?”

Quote your debit or credit card number giving a maximum limit dependent upon the amount of equipment returned for repair – phone in for advice first if you wish.

### “Do I need a licence for my radio microphone aid in the UK?”

No.

**“Will a receiver need to be re-balanced by my adviser after having been returned for repair?”**

Yes, unless you have made a note of the correct balancing reading from an Output Level Setter for both volume controls and the required tone control settings – see page 73.

**“If I quote my balanced output level setter reading for both the ‘Tx vol’ and ‘Env vol’ controls and tone control settings, will Connevens reset my receiver outputs for me after a repair so I do not need to visit my adviser?”**

Certainly – with pleasure.

**“When I carry out a processor reset the display shows some numbers, what does this mean?”**

This is quite normal, it is the software version number.

**“I have a woolly neck loop, can it be washed?”**

Yes – but hand wash only.



**“Should I still use my fmGenie receiver when there is a classroom soundfield system?”**

Yes – definitely.

**“How do I use my fmGenie receiver with a classroom soundfield system?”**

If the soundfield system is fm radio aid compatible (ie narrow band fm) simply tune to the correct channel; otherwise you will need to connect your transmitter to the amplifier unit to re-broadcast the sound – if you would like help do ask us.

**“Can I return the equipment for a routine check under warranty during the summer holidays?”**

Sorry but no.

Connevens reserve the right to make a charge for handling and returning equipment under warranty which is clearly not faulty.

**“Is there any more information on using fmGenie equipment?”**

The latest information sheets and operating instructions can be downloaded from the Connevens website – [www.connevens.com](http://www.connevens.com)



**“Can I purchase additional warranty beyond the first year?”**

Connevens sell extended second and third year warranties. Extended warranty is only available at the time you purchase the equipment or within the 1st month.

**“After the warranty period has expired what do I do about repairs?”**

No problem – simply return the equipment to either your adviser or Connevens as appropriate. Don't forget to write down the symptom of the fault and to keep costs down only return items which need attention.



**“Where can I see the full range of spares and accessories and how can I buy them?”**

Visit [www.DeafEquipment.co.uk](http://www.DeafEquipment.co.uk) and have your debit or credit card handy.



**“I am listening on the same frequency as a PA system but the sound is not as good as using my own transmitter?”**

The usual cause is that the PA system is using wideband radio microphones and whilst the frequency is the same and whilst you can hear ‘something’ the systems are not compatible – talk with us to discuss further.

**“I can hear through the fmGenie but there is distortion and its volume control makes little difference”**

Feeding too high a sound level from an fmGenie into a hearing aid with compression (WRDC) will cause such a problem. Rebalance the system see page 64.

**“Is there an easy way to find how old the equipment is?”**

Yes, all Connevens serial numbers have the manufacturing date as the first four digits eg. 0809 1234 would indicate that the equipment was made in 2008 in September.

**“It costs a lot to return equipment by post”.**

Postal charges are based on weight, so don't send back harnesses, batteries, chargers or system carrying cases, etc., if there is nothing wrong with them. In fact

don't send back anything which does not need repair – our repair charges reflect the amount of time we spend processing your equipment, so the more items you send back the more we'll charge you for checking them, putting them into bags and sending back to you – see Appendix 6.

**“I sent equipment for repair but have not had it returned”.**

Ah, did you post it in Ambridge about 2 weeks ago? We received a parcel without a name and address – sometimes we can locate the sender via a serial number.

**“Are batteries and direct input leads covered by the warranty?”**

All products that Connevens supply have a warranty, but these types of items should normally be regarded as consumables.

**“What about VAT?”**



This is subject to the current ruling at time of purchase, but, if in doubt, consult your local VAT office – at present an fmGenie can be zero-rated when sold to a deaf person or to a charity.

**“Is the Connevens fmGenie made in Britain?”**

Yes.



**“Any last advice?”**

Yes, check to see whether the equipment is insured and if you feel you require help with using your fmGenie, please ask your advisor or Connevens.



## Technical Appendices

These appendices take you through setting up the wide range of fmGenie features. Some of these features are more suited to the experienced user, so if in doubt we would suggest that you use the 'factory settings' until you are familiar with using your fmGenie.

Should you require any features explaining, please contact your audiological adviser or Connevars.

To activate new switch settings it is usually necessary to turn the fmGenie **OFF** and then **ON** again. Management settings rarely need changing once set.

To help you information is indicated as follows:

- = Basic information – for all users particularly new or individual users.
- ◆ = Further information for more experienced users – can be safely ignored if the feature is not required.

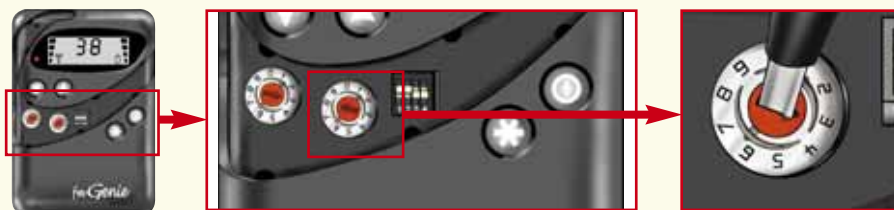
### Appendix 1: fmGenie default channel



Setting the default channel is the same for both transmitter and receiver . Under the front flash there are two rotary switches; the left sets the 'tens' and the right sets the 'units'.

If an invalid channel is set, the display will show error message 'E1'. For example, an 'E1' message is shown when the channel frequency scheme is changed and the default channel has not also been changed.

*If you find the numbers difficult to see, turn the fmGenie on, look at the display and adjust accordingly. You will need to turn off and on again to recheck.*



*Using the 'twiddling stick' to change settings*

- If the equipment is used in a 'one off' situation simply leave the channel 38 factory setting.

The rotary switches are numbered around the outside and if you look carefully you will see that the red slot has an indicator arrow at one end.

- ◆ If there are other radio system users on site, choose a channel that is not already in use – appendix 8, page 105, has the full list.

### Appendix 2: Transmitter settings

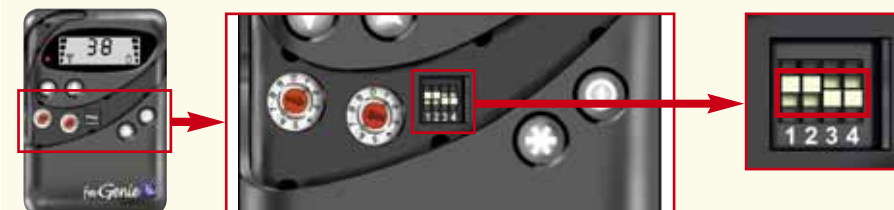


This appendix explains the various switch settings required to activate the wide range of fmGenie features. These settings rarely need changing once set.

*Please refer to page 38-39 for standard setting illustrations for MLxS/MicroMLxS and fmGenie Diversity soundfield systems*

#### Transmitter – under flash default settings

Switch 1	UP	50 KHz frequency grid
Switch 2	UP	50 KHz frequency grid
Switch 3	DOWN	Autotune disabled
Switch 4	DOWN	Channel UP/DOWN disabled



#### Transmitter – battery compartment default settings

Switch 1	UP	Always UP
Switch 2	UP	Slow AGC (for soundfield or conference mic use, set FAST AGC ie DOWN)
Switch 3	DOWN	Microphone manual mute enabled
Switch 4	UP	Test tone disabled
SR/LR	SR	Standard range (for use with MicroMLxS set LR)



*If you get in a muddle – don't worry, just put all the settings back to these defaults before starting again.*

## ALTERING SETTINGS



The easiest way to change switches is to use the straightened out end of an ordinary paperclip!



Use the 'twiddling stick' to change rotary channel settings.

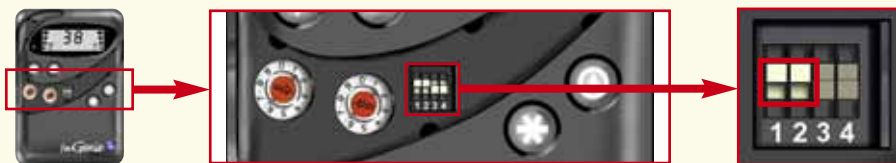
To activate new switch settings it is usually necessary to turn the fmGenie off and then on again.

## TRANSMITTER UNDER FLASH SWITCHES

### Under flash switches 1 & 2

Switches 1 & 2 choose the channel frequency scheme.

- Both UP selects the 50KHz european channel scheme - this scheme should be used for all new systems.
- ◆ Both DOWN selects the original pre-2004 UK channel scheme.



Refer to page 105 for full channel listings

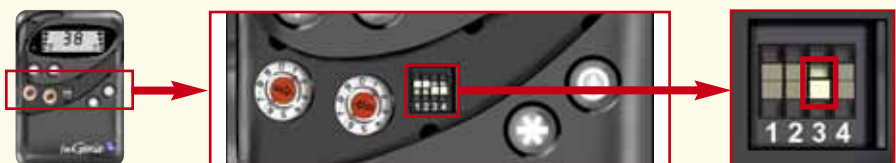
### Under flash switch 3

Switch 3 enables the autotune facility.

Factory setting DOWN – autotune disabled.

- This facility is not relevant for the single user.

DOWN is autotune disabled. UP is autotune enabled.



- ◆ On a multi-user site where transmitters are allocated to classrooms and students have their own, the autotune facility eases the complication of retuning as numbers of users move from class to class.

If the button is pressed during the 'channel select period' (i.e. flashing  $\Delta$ ) and autotuning is enabled, then a permission to tune signal is transmitted. The channel number flashes whilst a 'permission to tune' signal is actually being sent.

If the button is also pressed within the channel select period (i.e. flashing  $\Delta$ ), the unit scans through all channels and attempts to lock on to the transmitter. The unit is desensitised during scanning making it unlikely that it will lock on to the wrong. Another transmitter would also have to be within approximately 2 metres and have a permit to tune signal activated. Pressing the control a second time turns off the permission to tune signal from the transmitter.

The transmitter channel select period lasts for 2 minutes after switching on the unit (until the  $\Delta$  disappears).

### Under flash switch 4

Switch 4 controls whether the Tx UP/DOWN channel select buttons operate.

Factory setting DOWN – UP/DOWN buttons disabled.

- For a single user there is no reason to change channel and multiple users would normally be allocated their own specific channel to avoid clashing, so we would always expect this facility to be disabled in a.

DOWN is Tx channel changing disabled.

UP is Tx channel buttons enabled.



- ◆ As with a receiver pressing both together will select the default channel. In order to reduce 'accidental operation' the UP/DOWN channel select buttons only operate for 2 minutes after turning on. A short press of the button will also end the channel select period.

## TRANSMITTER BATTERY COMPARTMENT – USER SETTINGS

As with all settings for the fmGenie, consider one setting at a time. These settings rarely need changing once set.

### Battery compartment switch 1

This switch is not used! ■ Always UP.

### Battery compartment switch 2

Switch 2 determines the Tx microphone AGC (Automatic Gain Control) recovery speed.

Factory setting UP – slow AGC.

- If you don't know that you require the fast AGC leave slow selected i.e. switched UP!


UP is slow AGC.

DOWN is fast AGC.




- ◆ Different AGC characteristics can be advantageous in different situations. The slow AGC speed is identical to the AGC in the Connevens CRM-220 radio system and is particularly good for use with a tie clip microphone in averagely noisy rooms. However, the fast AGC speed is better for use with soundfield systems and headworn microphones where breath noise can 'knock out' slow AGC, or conference microphones where the table is likely to be knocked.

### Battery compartment switch 3

Switch 3 controls whether the Tx  button operates as a microphone manual mute.






Factory setting DOWN – muting enabled.



- This is a very useful facility for talkover use with TV's or when holding aside conversations. During a session, muting the microphone is easier and preferable to turning off the  when the user is temporarily not involved with the tutor.

DOWN is Tx microphone manual mute enabled.

UP is Tx microphone manual mute disabled.

- ◆ Pressing the  button during use will temporarily mute the  microphone. The alert indicator and  flash during muting as a warning. Pressing the  button again returns to normal. This function is not available whilst the  is flashing.

### Battery compartment switch 4

Switch 4 enables the 500 Hz test tone facility.






Factory setting UP – test tone disabled.

- Leave UP (disabled) unless you expect to use the test tone for fault finding.


UP is test tone facility disabled.

DOWN is test tone facility enabled.




- ◆ When activated, the  generates a 500Hz test tone which is transmitted to the . The 500Hz test tone is activated if the  button is held down whilst the Tx is being turned on. A flashing  is also shown on the status display together with a flashing alert indicator. A long press of the  button turns off the test tone.

The continuous tone can be helpful in locating intermittent faults with leads and shoe connections which might be hard to find if listening to someone talking (and occasionally drawing breath!).

Please note that using the test tone does not test the  microphone capsule.

The channel select period begins when the test tone is switched off.

A short press of the  button will end both the test tone and channel select period.



### Battery compartment SR-LR switch

The SR-LR switch changes the transmitter range.

Factory setting LEFT= 'SR'.

- You will probably only select LR (Long Range) when using Phonak MicroMLxS/MLxS receivers and cochlear implant processors to increase range or reduce occasional interference problems.

SR is Standard Range, indicated by three bars on the aerial display.



LR is Long Range, indicated by four bars on the aerial display.

- The 'LR' long range setting is sometimes required for use with other manufacturer's equipment or simply to give a longer range in outdoor pursuits.

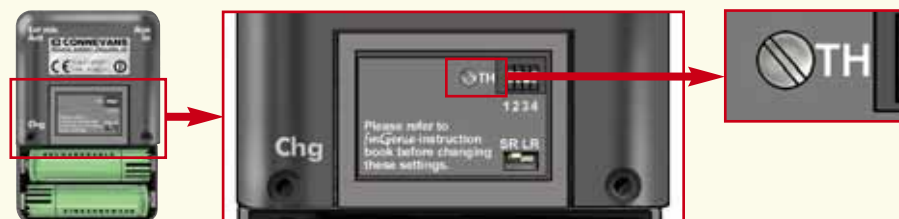
### Battery compartment TH control

The TH control adjusts the threshold level for showing the sound present symbol on the status display.

Factory setting '5 o'clock' (fully CW).


- You will only need to adjust this control if you find that the autopower off does not operate due to a high level of general background noise.

Fully clockwise is the most sensitive.



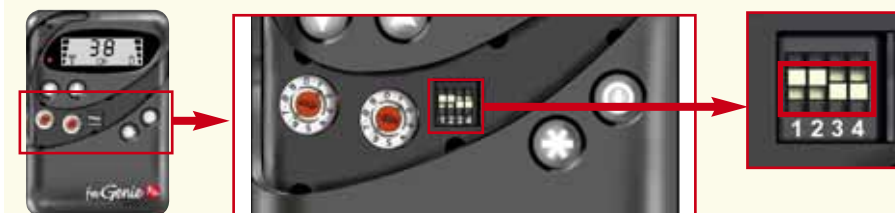
- The fmGenie has an auto power-off facility – if no sound passes through the system for an hour the fmGenie will turn itself off to save wasting batteries. The TH control sets the sound detection threshold for the sound present symbol which resets the 'auto power-off' timer when it flashes.

## Appendix 3: Receiver settings

This appendix explains the various switch settings required to activate the wide range of fmGenie  features. These settings rarely need changing once set.

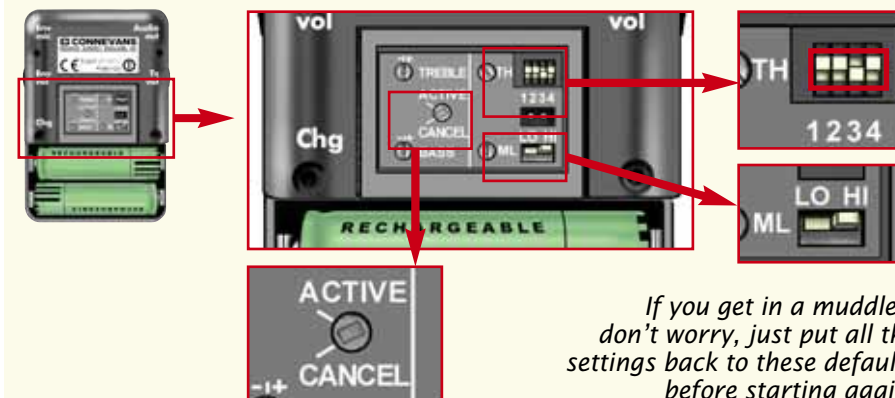
### Receiver – under flash default settings

Switch 1	UP	50 KHz frequency grid
Switch 2	UP	50 KHz frequency grid
Switch 3	DOWN	Channel tuning disabled
Switch 4	DOWN	Microphone manual mute disabled



### Receiver – battery compartment default settings

Switch 1	UP	Microphone dynamic mute disabled
Switch 2	UP	Slow AGC (for conference mic use, set FAST AGC ie DOWN)
Switch 3	DOWN	Normal operation (for WDI use UP)
Switch 4	UP	Normal operation (for WDI use DOWN)
LO/HI	HI	For use with test headphones or neck loop (for hearing aid direct input set to LO)
Active/Cancel	CANCEL	Tone adjustment not active



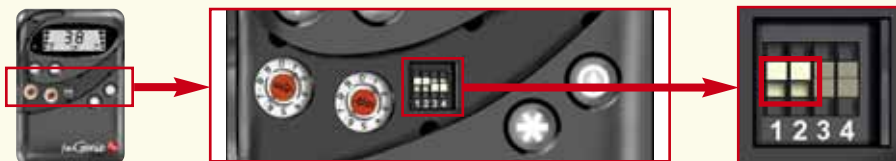
If you get in a muddle – don't worry, just put all the settings back to these defaults before starting again.

## RECEIVER UNDER FLASH SWITCHES

### Under flash switches 1 & 2

Switches 1 & 2 choose the channel frequency scheme.


- Both UP selects the 50KHz european channel scheme - this scheme should be used for all new systems.
- ◆ Both DOWN selects the original pre-2004 UK channel scheme.



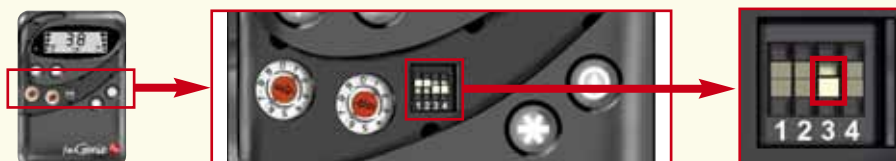
### Under flash switch 3

Switch 3 permits channel selection.




Factory setting DOWN – all tuning disabled.

- If a user will always listen to one  they do not need to be able to change channel.

DOWN is Rx channel and 'double button' default channel select disabled.



UP is channel select enabled.

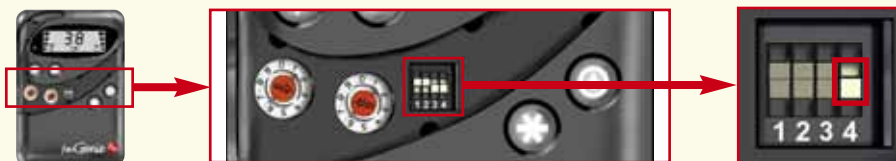
- ◆ When the switch is DOWN, only the default channel is available. The  and  buttons are disabled and the  button does not initiate the autotune function.

### Under flash switch 4

Switch 4 controls whether manual muting of the environmental microphone is operative.




Factory setting DOWN – manual muting disabled.


- This is a very useful facility to temporarily reduce background noise.




DOWN is Rx environmental microphone muting disabled.

UP is Rx environmental microphone muting enabled.

- ◆ Pressing the  button during use will temporarily mute the environmental microphone. This would be the hearing aid microphone for compatible direct input hearing aids or a  lapel microphone for neck loop users. Pressing the  button again returns to normal.

Muting is indicated on the display by the crossed mic. symbol .

The amount of muting is approximately 14dB. This function is not available whilst the  is flashing. Please note that this facility will not operate with some direct input hearing aids.

## RECEIVER BATTERY COMPARTMENT – USER SETTINGS

As with all settings for the fmGenie, consider one setting at a time. These settings rarely need changing once set.

### Battery compartment switch 1

Switch 1 controls whether the dynamic mute facility is available.


Factory setting UP – dynamic mute disabled.


- This facility improves the signal to noise ratio for listeners. However, due to the need to set the switching threshold correctly some users may find this facility fiddly to set up. We would recommend leaving this facility disabled until you are familiar with the general operation of your fmGenie.

UP is dynamic mute facility disabled.



DOWN is dynamic mute facility enabled.

- ◆ Dynamic muting is a facility which mutes a direct input hearing aid or environmental microphone whilst the lecturer is speaking. This reduces the pickup of general room noise and improves the signal to noise ratio for the listener. The TH & ML controls discussed overleaf must also be set. A circle  is shown in this mode once sound is detected.

A  symbol is shown when the microphone is actually muted.

Please note that this facility will not operate with some direct input hearing aids.



### Battery compartment switch 2

Switch 2 determines Rx mic AGC (Automatic Gain Control) recovery speed.

Factory setting UP – slow AGC.

- If you don't know that you require the fast AGC leave slow selected i.e. switched UP!

UP is slow AGC.

DOWN is fast AGC.



- Different AGC characteristics can be advantageous in different situations. The slow AGC speed is identical to the AGC in the Connevens CRM-220 radio system and is particularly good for use with a tie clip microphone in averagely noisy rooms. However, the fast AGC speed is better for use with conference microphones where the table is likely to be knocked.

### Battery compartment switches 3 & 4

These switches change between normal use and wire free direct input mode (WFM).

Factory settings – Switch 3 DOWN, switch 4 UP for normal use.

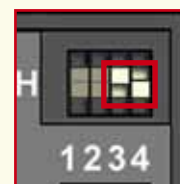
Normal use Switch 3 DOWN, switch 4 UP and no link plug.



Normal setting

Wirefree Direct Input

Switch 3 UP, switch 4 DOWN, output to HI and fit the link plug across pins – see page 46 for WDI settings.



WDI setting

### Battery compartment LO-HI switch

This switch changes the Rx output between neck loop or headphones level and hearing aid direct input level.

Factory setting RIGHT= 'HI'.

- The fmGenie is supplied from the factory set to HI level so that you can initially get your fmGenie system working using a test headset.

HI is high level for neck loop, headphones, WDI or cochlear implant processors.

LO is low level for direct input.



- The fmGenie uses unattenuated direct input leads so that we can offer dynamic muting for compatible direct input hearing aids; thus the choice of output level.

### Battery compartment TH control

This control adjusts the sound threshold level at which the dynamic mute cuts in.





Factory setting '5 o'clock' – fully clockwise.


- You do not need to adjust this control until the dynamic mute facility is required.

Turning the TH control anti-clockwise reduces the threshold at which the dynamic mute cuts in.





- ◆ To set the threshold, give the transmitter  to the person who will be using it and ask them to talk in their normal speaking voice and volume. Turn the TH control fully anti-clockwise then readjust the control clockwise until the  shows on the  display when the person is speaking. The  should disappear shortly after the person stops speaking.

Listen to the hearing aid and you should then be able to hear the 'noise' around you decrease when the  is showing. You may find a radio near you a useful 'noise' source.

Please note that the TH control also affects the sensitivity of the auto power off facility.


### Battery compartment ML

The ML control adjusts the transmitter mic. level when the dynamic mute operates.

Factory setting vertical or mid position.

- The dynamic mute facility, when correctly set, will much improve the listening experience in noisy rooms. However, as successful use relies on good feedback, it is a facility more suited to the experienced user'.



Turning the control clockwise or anti-clockwise increases or decreases the volume of the  while the mute is on.

- ◆ A facility to allow setting of a personal listening preference.

### Battery compartment ACTIVE /CANCEL switch

The cancel position for this switch cancels any treble or bass adjustment.

Factory setting 'CANCEL'.

- In common with 80% of hearing aid manufacturers, Connevans use 'standard' response microphone capsules. When connected to a radio aid, the hearing aid microphone is effectively replaced by the microphone in the radio aid. A tone adjustment facility is provided on the fmGenie to enable better matching of the frequency response for the other 20% of capsules.
- ◆ Cancel should be selected when testing to specification.



### Treble tone adjustment

This control sets the treble tone adjustment.

Factory setting vertical or mid position.

- Very much a matter of personal choice. Turning the control clockwise or anti-clockwise increases or decreases the amount of treble.
- ◆ A facility to allow improved clarity.

### Bass tone adjustment

This control sets the bass tone adjustment.

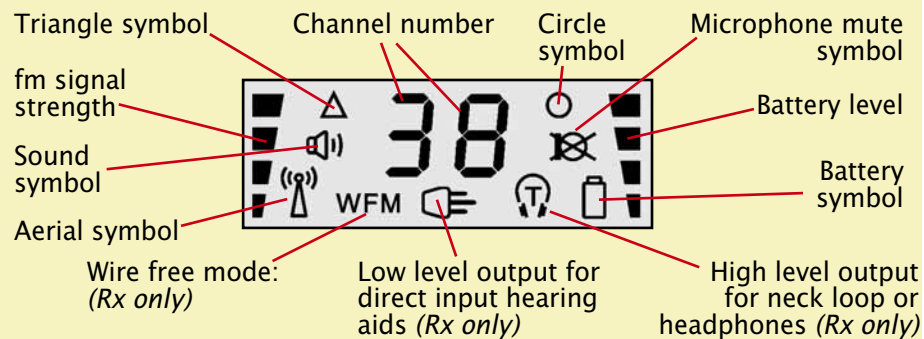
Factory setting vertical or mid position.

- Very much a matter of personal choice. Turning the control clockwise or anti-clockwise increases or decreases the amount of bass.
- ◆ A facility to allow improved clarity.

The tone settings should be a combination of test box measurements and personal preference.

**WARNING** Use of high bass and/or treble boost settings in combination with high volume settings may result in distortion and possible damage to your hearing aid, fmGenie, or other accessories.

## Appendix 4: Status display information



DISPLAY	WHAT IT MEANS & WHAT YOU SHOULD DO
<b>COMMON TO BOTH TRANSMITTER &amp; RECEIVER</b>	
	Indicates that sound is passing through the system.
	'In situ' charging rejected because batteries do not require charging. (If the fmGenie is on, the alert light will also flash). <i>Unplug charger.</i>
	Rolling bars indicate charging in progress. 4 rolling bars = full charge (10 hours). Top 2 rolling bars = top up charge (4 hours).
	If the charging period is interrupted by a power failure the display will show the period of charge completed eg. '1H' is between 1 and 2 hours. <i>Restore power to continue charging or press the star button until the display clears to stop the charge cycle.</i>
	Dual channel/team teaching mode selected. <i>Press either  or  to switch between channels.</i>
	Invalid default channel selected in the settings under the flash. <i>Reset to a valid channel, see page 84.</i>
	Synthesiser lock failure. Processor reset required. <i>Press , , &amp;  buttons together. If the error repeats, remove batteries and return for service.</i>
	Abnormal termination of charge cycle due to high temperature or battery failure. <i>Unplug charger, remove batteries (for at least 15 secs) and check or replace the batteries.</i>

	The selected function is disabled.
	A flashing  after turning on indicates that some form of channel change facility is permitted.
+ No battery bars	Totally exhausted battery. <i>Replace alkaline batteries or charge rechargeables.</i>
<b>TRANSMITTER ONLY</b>	
	Transmitter microphone muted. <i>Muting is activated by pressing the star function button, pressing again cancels the feature.</i>
	500 Hz test tone on. <i>Switched on by holding down the star function button whilst turning on. A long press of the  button cancels the tone.</i>
+ No aerial bars	No aerial bars, flashing aerial symbol & alert light – faulty or improperly connected microphone or aerial. <i>Substitute items and check again.</i>
1.  2.	1. Transmitter set to normal range. Output power 100μW. 2. Transmitter set to long range. Output power 1mW.
<b>RECEIVER ONLY</b>	
	Environmental or direct input hearing aid microphone muted – <i>if using correct fmGenie output lead.</i>
	Shows that the dynamic muting function is active and that sound has been detected. Symbol clears when turned off, processor reset or manual mute selected.
+ No aerial bars	No fm – squelch is operating.
	High audio output selected for neckloop or headphones.
	Low audio out selected for hearing aid direct input.
WFM	Wire Free Mode selected for wireless direct input (WDI)
	WFM enabled but low audio out selected. <i>Select high audio output or disable WFM.</i>
<i>In the very unlikely event of multiple error states, they will be displayed in turn as you clear them.</i>	

## Appendix 5: Important warnings and cautions

### Turn off immediately in the event of a malfunction

Should you notice smoke or an unusual smell coming from the charger unit or the equipment, unplug the charger from the mains and remove any batteries immediately from the fmGenie taking care to avoid burns.



Continued operation could result in injury. After removing the batteries contact your usual service and maintenance centre.

### Do not use in the presence of flammable gas

Do not use electronic equipment in the presence of flammable gas, as this could result in explosion or fire.

### Use appropriate cables and chargers

When connecting cables to the input and output jacks use only cables and chargers supplied or sold by Connevens for the purpose, in order to maintain compliance with product regulations.

### Observe proper precautions when handling batteries

- Always turn off an fmGenie before removing batteries.
- If you are using an in-situ charger, be sure it is unplugged from the fmGenie before removing or replacing batteries.
- Always switch off a plug-in charger before fitting or removing batteries.
- Batteries may leak or explode if improperly handled.
- Use only 1.5V AA alkaline or 1.2V AA nickel metal hydride rechargeable batteries.
- Do not attempt to charge non rechargeable batteries as this could cause fire or explosion.
- When inserting batteries take care to fit them the correct way round. Align their positive (+) and negative (-) terminals as shown on the label in the battery compartment.
- When replacing batteries, replace both batteries using two batteries of the same type and make. Do not either mix batteries of different types or use old and new batteries together.
- Non rechargeable batteries are prone to leakage when fully discharged. To avoid damage to your fmGenie remember to remove alkaline batteries when they become flat.

- Do not expose batteries to flame or to excessive moisture or heat.
- Do not short circuit or disassemble batteries.
- Never allow battery terminals to come into contact with other metallic objects. Use a rubber band to hold 2 or more batteries safely side by side, and put them in a plastic bag. The best way to carry batteries is to use a plastic battery case (*Part no. MBATCASE*).



### CAUTION

Observe the following precautions to ensure that you get the most from your fmGenie.

### Keep dry

The fmGenie is not waterproof and may malfunction if immersed in water or exposed to high levels of humidity.

### Do not drop

Your fmGenie may malfunction if subjected to strong shocks (never quickly open a carrying case and say BOO!) or strong vibrations.

### Avoid sudden changes in temperature

Sudden changes of temperature, such as when entering or leaving a heated building on a very cold day, can cause condensation inside the fmGenie. To prevent condensation place your fmGenie in a pouch, case or other bag before exposing it to sudden temperature changes.

### Do not attempt to open an fmGenie.

There are no user serviceable parts inside an fmGenie and you will invalidate the warranty. Should a unit break open as a result of a fall or other accident remove the batteries and return to Connevens for repair.

### Sticky or corrosive liquids

Should your fmGenie suffer spillage or immersion in liquid (eg cola), immediately remove the batteries and rinse the fmGenie in clean water. The fmGenie will still need to be returned to Connevens, however your washing out of 'nasty liquids' before they dry will minimise contamination and corrosion. Do NOT attempt to power up the unit to test it as you might cause further damage. Please return the unit to Connevens Service Department with a note explaining what has happened.



## Appendix 6: Connevans fmGenie after sales service and support

### Our philosophy

At Connevans we pride ourselves in providing a friendly and efficient repair service for our radio aid equipment – because we can assure you that if the equipment is regularly used then *someday* you *will* need us to carry out repair work.

### OUR SERVICE PROMISE

**We make you a service promise that for equipment manufactured by Connevans: on normally chargeable repairs, should your equipment be on our premises for more than one working week no charge will be made.** (That is unless of course you ask us to hold the equipment during the holidays – or we are waiting for your official order or payment!)

*Please note that this service promise does not apply to merchandised items (sorry!).*

### EQUIPMENT FOR REPAIR

Seven points to remember:

- 1 Follow the procedures given in this booklet to positively identify which parts may be defective. Remember that Connevans reserve the right to make a charge for processing equipment under warranty which is clearly not faulty.
- 2 Never return items which are clearly not faulty – harnesses, chargers, batteries, operating instructions, etc. – it costs you postage and is unnecessary.
- 3 Clearly list on your order/letter all the items that you are returning for repair with an individual note against each item indicating the problem you have found. Make sure that you keep a record of the items and their serial numbers that you are returning.
- 4 Always indicate intermittent faults, or faults which occur only after a period of time.
- 5 If you know that something has happened to the equipment – e.g. dropped or flushed down a toilet – please tell us, we won't unduly penalise you and we are much more likely to do a good repair for you if we know all the facts.
- 6 Make sure that items are well packed (many people don't). As a rule of thumb allow 25 mm (1") of packing material around light items with more around heavier items such as chargers. If you would be worried about dropping the parcel you have just packed on the floor you had better add some more protection!
- 7 Don't forget that the parcel is at YOUR insurance risk until safely received at Connevans.

### Helpline

During office hours Connevans offer a free fmGenie technical helpline on our switchboard telephone number 01737 247571, just ask for the 'fmGenie helpline'. We can also be contacted by email [fmgenie@connenvans.com](mailto:fmgenie@connenvans.com) or FAX 01737 223475.

When the equipment is owned by a local authority, in the first instance any queries should be referred to the advisory administrator as Connevans do not wish to conflict with local procedures.

### GUARANTEE FOR CONNEVANS fmGENIE RADIO AID SYSTEM

This undertaking is in addition to a consumer's statutory rights and does not affect those rights in any way.

**Connevans Limited undertakes that if any defect in materials or workmanship occurs in the product within TWELVE MONTHS from date of purchase it will be repaired or, at our discretion, replaced free of charge. This applies only if the product has been correctly used and has not been damaged through misuse, accident or neglect and has not been modified or repaired by anyone other than Connevans Limited.**

Added warranty may be bought at the time of purchase for fmGenie transmitters and receivers. Please refer to the Connevans catalogue for full details.

Connevans naturally accept no responsibility for loss or damage to customer's equipment until it has been safely received at our factory. Customers are advised to return equipment adequately packed and covered by appropriate insurance. Return postage will not be refunded.

The guarantee is conditional upon the equipment having been purchased and used solely within the UK.

The guarantee shall not apply to batteries, hearing aid connecting leads and other items of limited natural life.

Connevans Limited undertakes to supply spares and service for equipment of its own manufacture for a minimum period of six years from the date of purchase.

*Due to our constant endeavours to improve our products, Connevans reserve the right to alter the design, specifications or appearance of products without notice.*

### DECLARATION OF CONFORMITY

Hereby, Connevans Limited, declares that this fmGenie radio aid system is in compliance with the essential requirements and other relevant provisions of Directive 1999/5/EC.

The Declaration of Conformity for the fmGenie radio aid system is published on the website: <http://www.connenvans.com/ce>

At the end of their useful life, the packaging, product and batteries should be disposed of via a suitable recycling centre. Do not dispose of with your normal household waste. Do not burn.



Appendix 7: Record of your fmGenie settings

Make a record of your fmGenie settings on these pages so you can refer to them if you need to check or reset them for any reason, such as after repair. Much easier than working out your preferences all over again!

When returning fmGenie equipment for repair, please ensure that they are well packed with at least 25mm of protective packing around each unit. Our experience is that a padded postal packet does not provide sufficient protection.

If possible, please enclose a marked up copy of this page when returning equipment for repair.

**TRANSMITTER**

Serial no: .....

**RECEIVER**

Viewed from rear

Tx Vol

Locked? .....  
OLS reading .....

Viewed from rear

Env vol

Locked? .....  
OLS reading .....

Serial no: .....

Appendix 8: Frequency channel coding comparisons between different radio systems

MHz	Euro fmGenie & CRM-220	fmGenie & CRM-220 traditional	220 Code Letter	Solaris	Amigo	Lexis	Phonic Ear	Phonak	MLxS
173.350	38	0	N	13	13		Red/Brown	01 (green)	H01
173.400	39	1	A	15	15	15	Red/Red	02 (aqua)	H02
173.450	40			17	17				H91
173.465		2	B	19			Blue/Red	03 (blue)	
173.500	41			21	21				
173.545		3	C	23			Blue/Orange	04 (red)	
173.550	42			24					H92
173.600	43			25	25	25			
173.640		4	D	26			Blue/Yellow	05 (orange)	
173.650	44			27	27				
173.695		5	P	28			White/Grey	11 (green)	
173.700	45			29	29				
173.750	46			30	30				H93
173.775		6	Q&	31				12	
173.800	47			32	32	32			
173.825		7	R	33			White/Red	13 (blue)	
173.850	48			34	34				
173.900	49			35	35				
173.950	50	8	S	36	36		Orange/Blue	14 (red)	H14/H94
174.000	51	9		37	37				
174.050	52			38	38				
174.070		10	T	39			Black/Grey	15 (orange)	
174.100	53			40	40				H47
174.120		11	U	41			Black/Brown	16 (yellow)	H16
174.150	54			42	42	42			H95
174.185		12	V	43			Black/Red	17 (white)	
174.200	55			44	44				
174.250	56			45	45				
174.270		13	W	46			Black/Green	18 (grey)	
174.300	57			47	47				H48
174.350	58			48	48	48			H96
174.360		14	X	49			Black/Orange	19 (black)	
174.400	59			50	50				
174.415		15	Z	51			Black/Yellow	20 (violet)	H20
174.450	60			52	52				
174.500	61	16		53	53				H97
174.550	62			54	54				
174.600	63	17	E	55	55	55	Green/Blue	06 (yellow)	H06
174.650	64			57	57				H57
174.675		18	F	58			Pink/Orange	07 (white)	
174.700	65			59	59				H59
174.750	66			60	60				H98
174.770		19	G	61			Pink/Yellow	08 (grey)	H08
174.800	67			62	62	62			H50
174.850	68			63	63				
174.885		20	H	64			Pink/Green	09 (black)	H09
174.900	69			65	65				
174.950	70			66	66				H99
175.000	71			67	67	67			H67
175.020		21	J	68			Pink/Blue	10 (violet)	
175.050	72			69	71				

Note We always recommend that you should try to keep at least two channels separation (0.1MHz) between systems that are used near to each other - eg. in adjacent rooms.

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*Bring the magic  
of sound to your ears*



Electronics by Gareth,  
words by David, illustrations by Rosi  
and support from the rest of Connevens

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